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UPHOLDER OF THE FIGHTING TRADITIONS OF TURKEY: GHAZI SHUKRI PASHA, COMMANDER OF THE TURKISH GARRISON AT ADRIANOPLE.

The gallant defence of Adrianople may be said to have provided the only bright spot of the war in the Near East, so far as the Turks are concerned. It is not in the least surprising that the Turkish Government has decided to raise in rank by one step every officer of the beleaguered garrison. The renewal of the war began, we

need scarcely point out, by another attack upon the city. Elsewhere in this issue will be found a remarkably interesting drawing, from a sketch by Mr. Frederic Villiers, illustrating the last Turkish sortie from Adrianople on the night before it became known there that an armistice had been arranged.

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TO THE CONTINENT

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PARLIAMENT.

AT last this terrible Session, begun a year ago, is near its end. The Home Rule Bill, which the Commons passed by a majority of 110, has been rejected in the House of Lords by a majority of 257, after a debate which extorted the admiration even of Radical listeners in the Gallery on account of its thoroughness, its suggestiveness, its dignity, and its eloquence. Labour Members have obtained their Parliamentary reward in the shape of the Bill empowering Trade Unions (with certain safeguards for dissentient minorities) to raise funds for political purposes. To the third reading of this measure, which had been improved during its progress in the House of Commons, no objection was offered by Mr. Bonar Law, who denied that the Opposition were hostile to Trade Unions, although he deplored the political activity of these bodies, and said it was on account of that activity that they had failed in recent years to secure any material improvement in the conditions of their men. The successful passage of the Bill was due in a considerable degree to the Attorney-General. Although heavily burdened with work, he devoted a great deal of time to this measure, and by adroitness and courtesy, by a temper that was both conciliatory and firm, he removed some doubts and many difficulties. Sir Rufus Isaacs' reputation, like that of his legal colleague, Sir John Simon, has been further raised in the present Session, two more distinguished law officers having seldom, if ever, given their services to any Government. At the same time Mr. McKenna has completed a delicate task in the passing of the Welsh Disestablishment Bill, which now awaits the voice of the Lords. He made certain concessions to the Church on disendowment, but while these failed to conciliate the Opposition, they strained the Party allegiance of one or two Welsh Radicals. Mr. Llewelyn Williams, for instance, objected to the introduction into the Bill of a scheme of commutation, and amused the House by his gibes at young Mr. Gladstone, who had shown zeal in the interests of the Church, at official colleagues who "browsed contentedly on the fat pastures of the Ministerial fold," at Sir Thomas Whitaker, whom he described as "the Medusa of the Spen Valley," and at smooth-faced young men on the second bench who acted as private secretaries to members of the Cabinet. Although failing to satisfy Churchmen, while exciting uneasiness in extreme Nonconformists, the Home Secretary showed ability in debate, and refrained, as a rule, from acrimony. A conspicuous part was taken in the controversies by Sir Arthur Griffith-Boscawen, who consulted frequently with the Bishop of St. David's; and Mr. Lyttonell led the Opposition with tact and moderation. With the passing of the Welsh Bill the legislative work of the Commons has been almost completed; but a few odds-and-ends remain to be cleared away before they separate for a belated and inadequate recess.

THE PLAYHOUSES.

"THREE." AT THE LITTLE THEATRE.

THE programme with which Miss Gertrude Kingston has resumed management at her Little Theatre relies for its chief attraction on a play from the Italian, a comedy of modern Roman life, which is comedy in the truest sense, and is, therefore, needless to say, consistently delightful and diverting. Yet this work of Roberto Bracco, as the title of the English version, translated by Miss D. St. Cyr and adapted by Mr. Gilbert Cannan, might suggest, deals with a situation no less hackneyed than the triangular situation of husband, wife, and lover. Here we see a young married woman teasing her husband out of complacency into jealousy, playing the game of flirtation with the other man whom she banters till she is half-frightened by the lengths of audacity to which he seems prepared to go, and then, when she has stirred up her husband into passion, showing genuine indignation that he should suspect her, and yet enjoying all the while the drama of her position and the success which has crowned her scheme. The material of the play, as will be gathered from this summary of the plot, is of the slightest, but the never-ending variability of the heroine's moods, and her provoking sense of humour and appetite for mischief, make the development of even such a stock theme as is here employed fresh and full of surprises. The dialogue abounds in wit, but it is not forced wit, and fits in with character; while there is the happiest ingenuity displayed in the management of even such commonplace of the theatre as the scene in which a would-be Lothario tries to cut short the visit of a caller whose wife he is every minute expecting; or, again, a scene in which the baron, hearing his wife's cry, bursts in on what appears to be an assignation. "Three" appropriately employs the services of hardly more than three players—Mr. Ben Webster as the husband; Mr. Scott Craven as the lover; and Miss Gertrude Kingston as the wife. The men do well, especially Mr. Webster in the baron's moments of fervour; but it is Miss Kingston's virtuosity, her realisation of every passing phase of the baroness's restlessness and naughtiness, that supplies the acting triumph of the entertainment. A little one-act piece of Mr. Cannan's, "The Harbour of Refuge," completes the bill.

(Other Playhouse Notes on "Art and Drama" Page).

NOTICE.

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OUR SUPPLEMENTS.

OUR new photogravure process has aroused such a great amount of interest, not only in the technical world, but among our readers generally, that we feel sure they will welcome the special Supplement given with this issue, explaining and illustrating the new machines and their capabilities. To the average reader, no doubt, the intricacies of printing machinery and process-work are a mystery, only to be understood by experts. The public judges methods by results, and as a rule is content to be ignorant of the former. But, with the aid of the illustrations and the explanatory article, everyone can now form some idea of the wonders of the new machine which turns out exquisite photogravures at the rate of 6000 copies of an eight-page sheet per hour. It is the rapidity of the work, and its application to the illustration of current topics, that is the principal novelty. The very beautiful illustration by Edmund Dulac which is given as a coloured Supplement to this issue is an enlargement of that published as a frontispiece to "The Sleeping Beauty"; and other Fairy Tales from the Old French, retold by Sir Arthur Quiller-Couch and illustrated by Mr. Edmund Dulac, a book published by Messrs. Hodder and Stoughton. The charm of the subject, we feel, is ample excuse for its republication on a larger scale than was possible in the fascinating volume in question. It will be recalled that some beautiful examples of Mr. Dulac's work appeared in our Christmas Number.

THE SOUTH POLE.

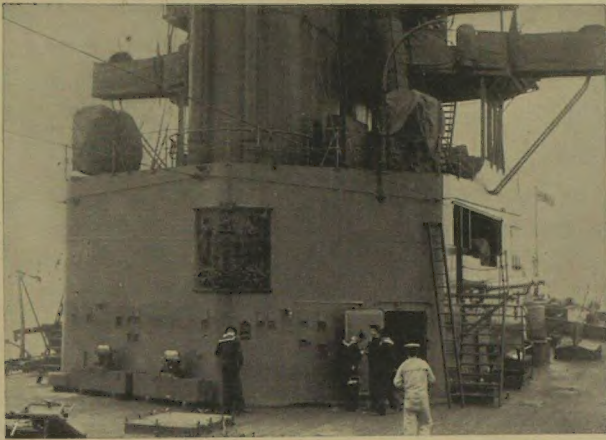
FROM its very nature Captain Roald Amundsen's account of his discovery of the South Pole is one of the world's memorable books of travel and adventure. It is also the last of a particular class in which Amundsen and Peary stand alone. There will, of course, be many other accounts of Polar expeditions, for those regions are not nearly exhausted for the scientific observer; but the record of reaching the long-sought-for goals at the extremities of the earth's axis will always possess a piquancy that no other books of travel can convey. "The South Pole" (John Murray) comes to us in two handsome volumes. The story of the two years' expedition on the *Fram* is told by its commander with infinite detail, and in a most graphic style. Captain Amundsen is richly blessed with that saving sense of humour which carries men through tight places and gives the born leader of men an additional influence. It is a story of patience, endurance, ready resource, and final triumph. Perils, needless to say, beset the expedition at every step. Just before they reached the Pole they struck a piece of surface of the most treacherous nature. It was a double crust of ice with a deceptive appearance. The first sign of danger was the falling through of the leading sledge-dogs. One of the explorers also went through, not only the upper crust, but some distance into the lower as well, only saving himself in the nick of time by catching at a loop of sledge-rope. This bad piece of ice the merry explorers named "His Majesty's Ballroom." Thereafter there was better going. The ground was rising steadily as they advanced, but one day Captain Amundsen noticed, to his surprise, that the boiling point of water had not risen since the previous day. To the great relief of all, they had reached the top of the South Polar plateau. The weather was hazy. Amundsen, anxious for his final observations, tells us that never before did "he stand and pull at the sun to get it out" as he did then. He feared that dead-reckoning might not be considered satisfactory proof at home. Anyhow, whether his pulling helped or no, the sun was good enough to shine and an observation was secured. The result was precisely that of their reckoning! After such a result they might very well go on to the Pole on dead-reckoning alone if need were. They passed 83 deg. 23 min. with deep emotion, paying as they went a chivalrous tribute to Shackleton. The finding of the Pole reads like a joyous picnic, and, despite the hardships, of which little is said, it is evident that the party enjoyed their triumph. The story of their adventures must be read at length in Amundsen's entrancing pages.

AT THE BOOKSELLERS.

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INSPECTED BY THE KING: THE "NEW ZEALAND"—THE LONG WHITE CLOUD.

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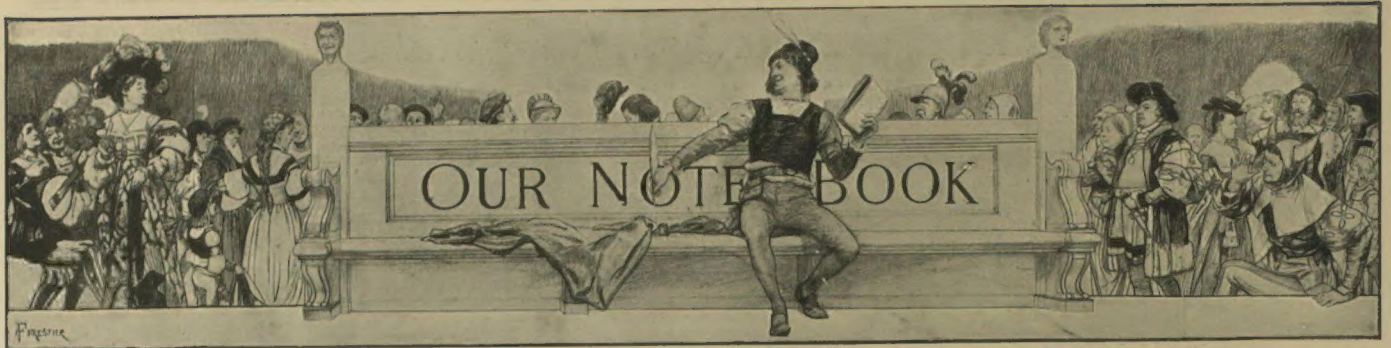


1. ABOARD THE GIFT WAR-SHIP THE KING ARRANGED TO INSPECT ON WEDNESDAY, FEBRUARY 5: THE DOMINION COAT-OF-ARMS ON THE BATTLE-CRUISER "NEW ZEALAND."
2. THE MAORI NAME FOR NEW ZEALAND ON THE BATTLE-CRUISER "NEW ZEALAND": A FEATURE OF THE VESSEL TO WHICH IT WAS ARRANGED THAT THE KING'S ATTENTION SHOULD BE DRAWN.
3. DURING THE INSPECTION OF THE VESSEL BY NEW ZEALANDERS: H.M. DESTROYER "PHOENIX" STEAMING PAST—HIGH ON THE LEFT, THE BRIDGE OF THE "NEW ZEALAND."

The King arranged to inspect the battle-cruiser "New Zealand," the gift of New Zealand to the British Navy, on Wednesday, February 5. A preliminary inspection was made the other day by New Zealanders in this country, and the Dominion coat-of-arms on the vessel was unveiled by Miss Mackenzie, daughter of Mr. Thomas Mackenzie, High Commissioner for

4. ABOARD THE "NEW ZEALAND": CAPTAIN LIONEL HALSEY, IN COMMAND OF THE SHIP; MR. THOMAS MACKENZIE, HIGH COMMISSIONER FOR NEW ZEALAND; AND MR. JAMES ALLEN, NEW ZEALAND MINISTER OF DEFENCE.
5. ABOARD THE GIFT-SHIP SETTING OUT ON A 4,000-MILE CRUISE TO NEW ZEALAND WATERS AND ELSEWHERE: 12-INCH GUNS, SMALLER GUNS, CONNING-TOWER, AND TRIPOD MAST OF THE "NEW ZEALAND."
6. WHERE IT WAS ARRANGED THE KING SHOULD BE RECEIVED ON HIS VISIT OF INSPECTION: THE AFT-DECK OF THE "NEW ZEALAND."
7. VISITING THEIR COUNTRY'S GIFT TO THE NAVY: NEW ZEALANDERS GOING ABOARD.

New Zealand, who was accompanied by, among others, Mr. James Allen, the Dominion Minister for Finance, Defence, and Education, and Sir Richard Solomon, High Commissioner for South Africa. The name "Ao-tea-roa," a feature of the ship, is that given to New Zealand by the Maoris when they first sighted it from their canoes. It means "The long white cloud."



BY G. K. CHESTERTON.

I AM glad to see that protests are beginning to rise against those crazy exaggerations of the philanthropists, who are always wanting us to sacrifice the natural to the unnatural, and the certain to the possible. Our social reformers have a wonderful way of manufacturing fifty fresh vices in the pretence of suppressing one. For instance, there is the maze of immorality that spreads whenever a State attempts the ridiculous experiment called Total Prohibition. I was told by a friend who had travelled in what the Americans call "a dry State," that his innocent request for a glass of whisky in an hotel had been answered by radiant and animated directions as to where he would find "the hat-room." His first feeling was that the hat-room was the headquarters of the Mad Hatter, who evidently ran the hotel. His second was a dim speculation as to how whisky tasted when drunk out of a hat. At last it occurred to him that "hat-room" was American for what we commonly call "cloak-room"; but even then he could not imagine what it had to do with whisky. He soon found out; for everything was quite ready, and the custom was clearly in full swing. In the cloak-room were stored a number of strapped trunks and suit-cases labelled in the names of various fictitious American citizens and crammed with bottles of beer, wine, or spirits. From these he was handsomely regaled; and the trunk was then strapped up again, so that if the police entered that temple of abstinence, the management could profess ignorance of the contents of luggage left in its charge. Now, suppose my friend had drunk four times as much whisky as he wanted, and rolled dead drunk down the front steps of the hotel, could he have fallen lower than the lowness of that exquisite legal fiction? See what a number of new sins the "dry State" succeeds in creating, in the course of failing to cure that of drunkenness. The man going to the hat-room has all the drunkenness he wants, with the following agreeable additions: (1) he has become a liar, calling things by false names and doing one thing while pretending to do another; (2) he has become a rebel and a bad citizen, intriguing against the law of his country and the efficiency of its public service; (3) he has become a coward, shrinking through personal fear of consequences from acts of which he is not morally ashamed; (4) he has become a seducer and a bad example, bribing other men to soil their own simplicity and dignity; (5) he has become a most frightful fool, playing a part in an ignominious antic from which his mere physical self-respect could hardly recover; (6) he has, in all probability, come much nearer than he would in any other way to having a craving for alcohol. For anything sought with such horrible secrecy and pertinacity has a great tendency to become magnetic and irresistible in itself; a sort of fetish. And all that brought about in order to prevent a man getting a glass of whisky—which he gets after all. People who support such prohibitions can have no care for human morality at all.

There is a similar case of universal degradation for the sake of one minor precaution, in that epidemic of unpleasant pamphlets that has broken out on the bookstalls in connection with certain social evils.

Girls are gravely told not to offer any assistance to old ladies who are ill or fainting, for fear they should be fraudulent agents of atrocious foreigners. Now, here again consider what is to be gained, and what is lost in order to gain it! In order to be quite safe from a danger which at the very worst must be exceptional, a danger which no one would wish a healthy young person to think about constantly, the healthy young person is to abandon entirely: (1) All her instinctive pity for the sick and unfortunate; (2) all her decent respect for old age and its sublime insecurity; (3) all her sympathy with her own sex; (4) all her innocent repugnance for lewd and defiling trains of thought; (5) all her common youthful courage and curiosity, and cheerful view of the adventure called life; (6) all that she has left of the child's confidence in strangers; (7) all that she has yet gained of the woman's appetite for

there is no such evil as is here guarded against: it exists as leprosy and cannibalism exist; and it ought to be attended to, like leprosy and cannibalism, by those who are sufficiently exceptional and devoted to know something about it. The question here is whether millions of ordinary young people ought to have all their faith, hope, and charity poisoned by a perpetual day-dream on the subject of leprosy or cannibalism. That the evil is not so omnipresent and omnipotent as these warnings suggest, is a matter of manifest common-sense. If criminals can act so swiftly and successfully as that, why do not other criminals do it? Why are not our wealthy uncles hidden in coal-cellars and held to ransom by brigands? Why are not elderly millionaires carried off to the attics of Soho as easily as to the mountains of Sicily? But I will dwell no further on this ugly example; for it is only one of many cases of this disease of

sacrificing the normal to the abnormal. We see it in the exaggerated prudence of hygiene: an extraordinary microscope in which microbes look much larger than men. A man would be ashamed to be found always making feverish and elaborate calculations to avoid meeting a large dog. He would be humiliated if found hiding behind a hedge from the passing of a rather tall horse. He would not with any pride hang up in his parlour a coloured map of the district, showing the lanes that were least troubled by the driving of cattle. But though it is a little undignified to be greatly afraid of large animals, it is thought quite creditable to be insanely afraid of small ones. Upon this theory, St. George, who could face a large dragon, would have been quite unnerved by a very tiny dragon; Jack the Giant-Killer would have trembled before a dwarf; or if Andromeda had been chained up to be eaten by ants, Perseus would have fled in terror. Here, again, there is a real danger, which sensible people guard against in a sensible way. It is as rational to avoid sickness as to avoid shipwreck. The point is that some people avoid shipwreck by never going on a ship.



M. Tchaprashikoff. Dr. Daneff. M. Mitcheff. M. Angeloff.
MANIFESTLY CONFIDENT IN THE FUTURE: DR. DANEFF, AND OTHER BULGARIAN DELEGATES LEAVING LONDON, ON THE DEPARTURE PLATFORM AT CHARING CROSS.

Dr. Daneff, Premier of Bulgaria, and chief of the Bulgarian Peace Delegates, left London on February 2, with M. Mitcheff, Mr. Tchaprashikoff, and M. Angeloff, First Secretary of the Delegates. The other Bulgarian Delegates left two or three days earlier. His Excellency M. Michael Madjaroff, who is also seen in the photograph, is the Bulgarian Minister in London.

Photograph by Newspaper Illustrations.

being of some practical use. You have uprooted all the virtues of Martha and Mary, of Isabella and Rosalind, of Antigone and Joan of Arc; and all in order to prevent one hypothetical old lady in a thousand taking someone to one hypothetical house in a thousand, a kind of house in which it is apparently impossible (I don't quite know why) to break a window and call out for help.

It may further be noted, not without amusement, that the caution thus recommended to women is equally contrary both to the new theories of womanhood and the old. The militant Suffragette ought not to be so timid. The conventional spinster ought not to be so imaginative. This negative attitude robs a woman of all the virtues of a maiden aunt, and leaves her all the vices—suspicion, narrowness, social-exclusiveness, and exaggerated self-protection. It also leaves her all the vices of a tomboy, but carefully removes all the virtues—courage, hopefulness, and an appetite for human society. Jane Austen would have thought it beneath her to think of such things. Emily Brontë would have thought it beneath her to fear them. I am not saying, of course, that

We shall never solve one of our problems so long as one fear is allowed to outweigh a thousand common probabilities. For all the real and rational fears which are exaggerated into these priggish panics, the one sensible cure would be exactly the thing that everybody is trying to pull to pieces: the unity and authority of the Family. It is a man's wife and children who ought to make it hot for him if he dangerously and insanely frequents the hat-room with no legitimate interest in hats. It is a girl's father and mother who ought to teach her self-protection and the sane limits of a confidence in strangers, fainting or otherwise. It is a child's parents who ought to see that grave hygienic risks are not run. Nothing can be more unhealthy than that the child should worry about health. It is the wife and the household as a whole that should weigh with a man in a due degree when he is deciding whether he will go on strike; and I am quite sure it is this that generally does weigh with him. This institution of the ordinary home, which can alone cope constantly and vigilantly with such evils, is the one thing we have worn to the bone with economic tyranny and are now dismembering with new and inhuman laws.

THE CAMERA AS RECORDER: NEWS BY PHOTOGRAPHY.

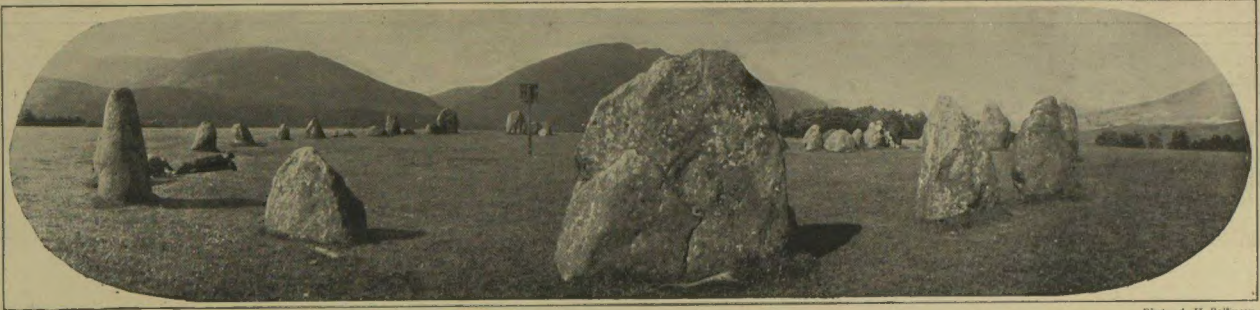


Photo. A. H. Robinson.

BOUGHT FOR THE NATION BY THE NATIONAL TRUST: THE SO-CALLED DRUIDS' CIRCLE, NEAR KESWICK.

The Druids' Circle at Keswick has been well known to antiquaries from the early eighteenth century; to be precise, from William Stukeley's visit in 1725. The circle, which is remarkably perfect, has forty-eight stones still standing.



Photo. Sport and General.

AN EVENT OF GREAT INTEREST AT THE "ZOO": THE COCK BIRD OF A PAIR OF KOLB'S VULTURES SITTING ON AN EGG.

There has been great excitement at the "Zoo" over the fact that a pair of Kolb's Vultures were endeavouring to hatch an egg, especially as on previous occasions the hen bird has proved a very bad mother, and has usually destroyed her egg before the time for the appearance of the chick. The photograph shows the cock bird sitting. The egg has since become addled.



Photo. Topical.

UP-TO-DATE AFRICA: NATIVES MAKING CLOTHES WITH THE AID OF A SEWING-MACHINE, IN GERMAN EAST AFRICA.



Photo. Sport and General.

GREEDIER THAN THE GLUTTON! THE FOSSA AT THE "ZOO," THE HEAVIEST EATER OF ITS SIZE.



Photo. Sport and General.

LATELY ADDED TO THE "ZOO'S" COLLECTION: A WHALE-HEADED HERON.



Photo. Sport and General.

THE ONLY SPECIMEN OF ITS KIND IN EUROPE: THE WHALE-HEADED HERON AT THE "ZOO."

The fossa eats even more than does the glutton, which was for some time looked upon as the biggest eater of any animal of its size at the "Zoo." Since October 28 the fossa has consumed over 192 lb. of food, compared with the glutton's 114 lb. It has also eaten a good deal of its sleeping-box, and much paint.



AN ARM WHICH HAS BEEN OF GREAT VALUE TO THE BULGARIANS FIGHTING THE TURKS: SMALL QUICK-FIRERS IN USE BY INFANTRY.

The first of these two photographs shows a small quick-firer used with considerable effect by Bulgarian infantry for the support of their attacks. The second deals with the carrying out of the Glanville Charity in the churchyard of Wooden Hatch, near Dorking. The late Mr. George Glanville left a sum of money to be devoted year by year to providing prizes for seven boys who could recite correctly the Lord's Prayer, the Ten Commandments, and the Creed. The candidates have to pass their examination with their hands resting on the testator's tomb. The prize consists of forty shillings and a pair of rabbits for each successful boy.



Photo. Newspaper Illustrations.

RECITING THE LORD'S PRAYER, THE TEN COMMANDMENTS, AND THE CREED, FOR SHILLINGS AND RABBITS: A CURIOUS TOMB-SIDE CEREMONY.

WHEN THE THREAD OF THE WAR WAS BROKEN: THE LAST ENGAGEMENT AT ADRIANOPLE BEFORE THE ARMISTICE.

DRAWN BY H. W. KIRKCOCK FROM A SKETCH BY FREDERIC VILLIERS,

OUR SPECIAL ARTIST RECENTLY BEFORE ADRIANOPLE WITH THE ALLIED ARMIES.



THE TURKISH SORTIE FROM ADRIANOPLE ON THE NIGHT BEFORE THE ARMISTICE:

The fact that the renewal of the war in the Near East began with a vigorous attack upon Adrianople lends unusual interest to this drawing, which shows the final effort of the gallant Turkish garrison to break through the ring of the investing armies on the night before the news of the armistice reached the beleaguered city. We received the sketch from Mr. Villiers almost immediately after the announcement of the armistice, and did not make use of it at the time, as we hoped, in common with so many others, that the last battle of the war had been fought. We reproduce this drawing now as illustrating most dramatically the moment at which the thread of the fighting was broken. In the left foreground, a Turkish shell is bursting; in the background are the flashes of infantry-fire and of burning Turkish shrapnel; and the beams of a Turkish searchlight. Describing the sketch, Mr. Frederic Villiers wrote to us: "Simply by accident, Mr. Maitner and I were able to see this fight. I was trying to reach the Bulgar-Serbian positions on the right bank of the Maritsa, when I was stopped by a Bulgarian officer, who, not satisfied with my headquarters pass, telephoned to Mustafa Pasha for instructions. Such a message arrived ordering me to return. As night was coming on, I asked permission to sleep in the village of Kamel, which was granted. Maitner found a Bulgarian hotel, where we settled down. Our business was very sick with the strain of living in an entrenched village, and very frightened. She got us some tea, and we were drinking it when her husband came in and reported a Turkish searchlight finding for trouble. Presently the trouble came. A low

SERVIAN INFANTRY HURRYING TO THE TRENCHES OF KAMEL TO REPULSE THE ATTACK.

rumbling noise was heard from the direction of Adrianople, and a shell burst in the valley below the village. The old woman knelt and crossed herself and began to pray. Immediately the whole country from right to left of us was alive with bursting projectiles and the rattle of musketry. For an hour the rifle-fire was confined to the Maritsa valley on our immediate left and over the hills towards the Arda. The Turks were trying to break through the Bulgarian lines in the Arda valley. Then infantry-fire started over the ridge to the left of our village. Here for two hours the fighting was fast and furious: the Turks were evidently making an advance from the Tundja to hold the Servians in check, while the Serbs pressed forward along the valley of the Arda. We were now practically in the centre of the battle, for the Serbian Danubian division across the Maritsa was engaged with the enemy far in our rear, and our batteries a mile in the rear of the village were pounding away at the Turkish positions over the ridge in our front. Till half-past ten the fight lasted, and then the infantry-fire died down and ceased. The old woman was still at prayer when we returned to the hotel. At last we all fell asleep. It was about six in the morning when the curious rumble of the Turkish guns awakened me. The old lady had heard, for she had lit a candle, and was again fervently praying. I had hardly time to reach the door when the whole position once more was illuminated with bursting shells, and the air filling with the hideous shriek and concert of shells. For an hour, in almost a tropical downpour, the ghastly business went on. At two o'clock the attack suddenly ceased."



Photo, Russell.

MR. W. R. LAWSON,

The Financial Writer who criticised the Marconi Contract, and has given evidence before the Select Committee.

and politician. For over twenty years he was associated with the Birmingham General Hospital. He entered Parliament in 1885 as Liberal Member for Chester, and from 1887 to 1910 represented Ilkeston. From 1892 to 1895 he was Parliamentary Secretary to the Local Government Board.

Lord Ilkeston is succeeded by his only surviving son, the Hon. B. S. S. Foster, who since 1910 has been Stipendiary Magistrate of Birmingham. The new Peer was called to the Bar in 1892, and for some years held a post as Revising Barrister.

In 1891 he married Miss Mildred Charlotte Cobb, daughter of the late Mr. H. P. Cobb, M.P.

Lord Crawford, who was the twenty-sixth holder of his title, celebrated in 1898 the quinquenary of the creation of his earldom. He was very distinguished as an astronomer, naturalist, and explorer. In 1878-9 he was President of the Royal Astronomical Society, and presented to the nation his observatory and library. He made several scientific voyages in his steam-yacht *Valhalla*. From 1874 to 1880 he was M.P. for Wigan.

Lord Balcarras, who now goes to the Upper House as Earl of Crawford, has, since 1911, been Chief Unionist Whip in the Commons, where he will be much missed. He has represented the Chorley Division since 1895, and has been a Junior Lord of the Treasury. He married, in 1900, Miss Constance Lilian Pelly, daughter of Sir Henry Carstairs Pelly, M.P.

Colonel James McCalmont had represented East Antrim in the House of Commons for over twenty-seven years. He was a strong Unionist, and had taken an active part in opposing Home Rule. As a young man he was in the 8th Hussars. In Ulster he was well known as a sportsman.



Photo, Lafayette.

THE LATE COLONEL J. M. MCCALMONT, M.P.,

Who had represented East Antrim, as a Unionist, since 1885.

THE LATE LORD ILKESTON, Who was the only Medical Man in the House of Lords.—(Photo, Fradette and Young.)

AS Sir Walter Foster, the late Lord Ilkeston, who was raised to the Peerage in 1910, was well known in the Midlands both as physician

Little hope was felt that the report as to the loss of a naval cutter belonging to H.M.S. *Perseus*, with ten men, in the Persian Gulf, would prove incorrect. Lieutenant Humphrey Walter Smith, who commanded the cutter, is a son of the Vicar of Andover, the Rev. Walter Edward Smith. He had experience of disaster at sea, for he was serving on the *Montagu* when she went ashore on Lundy Island.

Admiral Sir Frederick Bedford saw much active service. He fought in the Crimean War and was



Photo, Dover Street Studios.

THE LATE EARL OF CRAWFORD,

Premier Earl of Scotland, and distinguished as a Scientist and Explorer.

present at the bombardments of Odessa and Sevastopol. In 1877 he engaged a rebel Peruvian ironclad, and in 1884 he organised the Nile flotilla in the Gordon Relief Expedition. Later, at the Cape, he led several expeditions against slave-raiders. From 1903 to 1909 he was Governor of Western Australia.

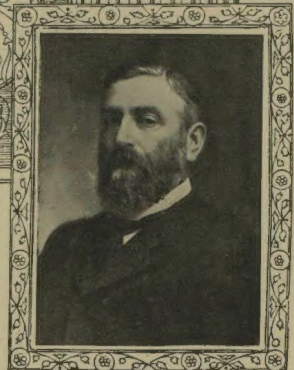
Mr. James Falconer, Liberal Member for Forfarshire, awoke the other day to find himself famous as

a cross-examiner, and some have expressed the opinion that the Bar has lost in him a brilliant advocate. His questioning of Mr. W. R. Lawson before the Select Committee on the Marconi Contract was peculiarly calm and relentless. Mr. Lawson, it will be recalled, is the financial writer who strongly criticised, in the *National Review* and elsewhere, the Government's dealings with the Marconi Company over the wireless-telegraphy contract. So searching was Mr. Falconer's cross-examination that, after enduring it for four days, Mr. Lawson protested that, if it went on, he might have to refuse to answer any more questions. Mr. Falconer, who is a Writer to the Signet, was born at Carmyllie, Forfarshire, in 1856. He was educated at Arbroath High School and Edinburgh University.

Sir Gordon Sprigg, who died at Capetown on Feb. 4, was for many years prominent in South African politics. He went out in 1858 for reasons of health and entered the Cape Parliament in 1873. He was four times Premier, from 1878 to 1881, 1886 to 1890, 1896 to 1898, and 1900 to 1904. He was the son of a Baptist Minister at Ipswich.

Admiral Sir William May has been promoted to be Admiral of the Fleet in place of Sir Charles F. Hotham, who retires next month. Sir William May has since 1911 been Commander-in-Chief at Devonport. He has also held the posts of Commander-in-Chief of the Home Fleet, Second Sea Lord, and Controller of the Navy. This year he keeps the jubilee of his naval career, which commenced in 1863.

It was an irony of fate that the Turkish Generalissimo, after surviving a sanguinary campaign, should die by the bullet of a compatriot during the armistice. Nazim Pasha has been succeeded by his Chief of Staff, Izzet Pasha, who entered on the second stage of the Balkan conflict as Commander-in-Chief of the Turkish Army.



Photo, Elliott and Fry.

MR. JAMES FALCONER, M.P.,

Whose cross-examination of Mr. W. R. Lawson before the Marconi Contract Committee aroused so much interest.



Photo, Elliott and Fry.

THE LATE SIR GORDON SPRIGG,

Formerly Premier of Cape Colony.



Photo, Illus. Bureau.

LIEUTENANT HUMPHREY W. SMITH, R.N.,

Commander of the Naval Cutter reported lost in the Persian Gulf.



Photo, Vandyk.

THE LATE ADMIRAL SIR F. G. D. BEDFORD,

Formerly Governor of Western Australia.



Photo, Dinham.

ADMIRAL SIR WILLIAM HENRY MAY,

Who has been made an Admiral of the Fleet.



Photo, Record Press.

THE TURKISH GENERAL, IZZET PASHA,

Who succeeded Nazim Pasha as Commander-in-Chief.

CAMERA NEWS: PHENOMENA NATURAL, POLITICAL, AND MECHANICAL.



Photo, Record Press.

A TRAIN BLOWN OVER INTO THE SNOW; A SERIOUS RAILWAY ACCIDENT IN GERMANY.

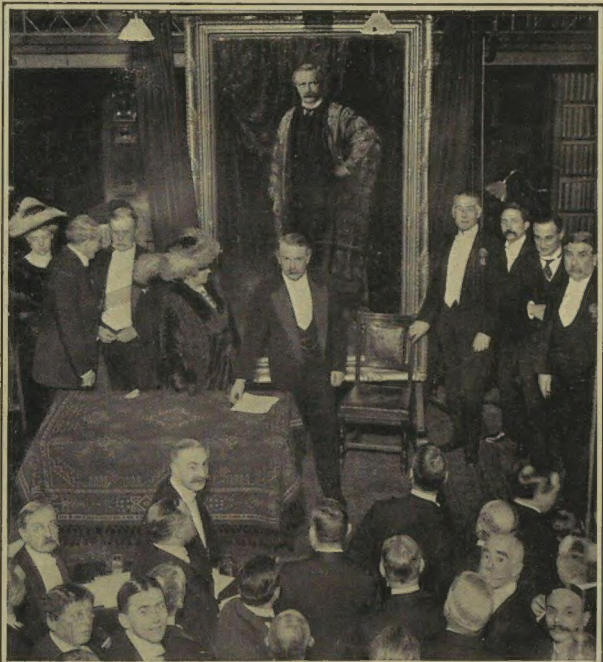
During a recent gale in Saxony a narrow-gauge train of eight coaches was blown over into the snow, between Reichenau and Zittau. One coach took fire and was burnt. There were seventy passengers in the train, but fortunately, none of them received very serious injuries.



Photo, L.N.A.

HOW PILOT AND PASSENGER MAY CONVERSE IN THE AIR: AN AEROPLANE FITTED WITH AN ELECTRIC TELEPHONE.

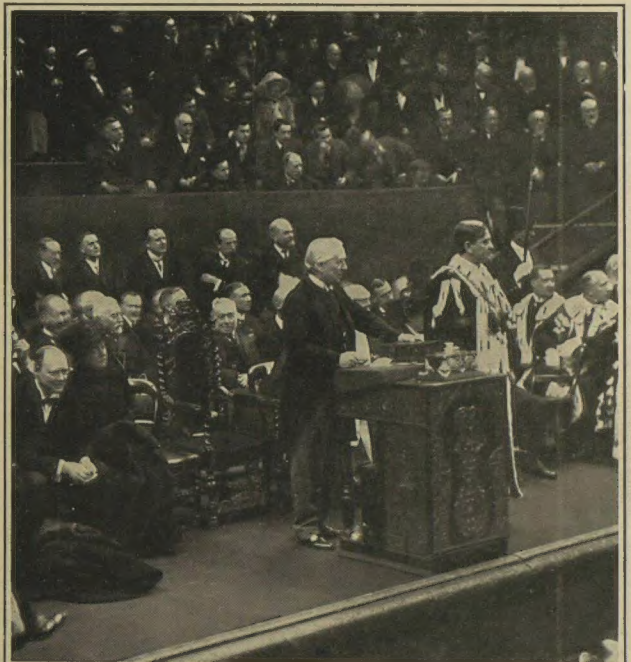
The photograph shows a new type of plane, made by Messrs. Handley Page, being tested at the London Aerodrome by Mr. Sidney Pickles, who is seen in front. One of its novelties is a small electric telephone for communication between the pilot and the passenger in the air.



Photo, Typical.

THE CHANCELLOR OF THE EXCHEQUER HONOURED AT THE NATIONAL LIBERAL CLUB; MR. LLOYD GEORGE AT THE UNVEILING OF HIS PORTRAIT.

Mr. Lloyd George was the guest of honour at a dinner given by the National Liberal Club on January 31, and he was presented with his own portrait, the work of a Welsh artist, Mr. Christopher Williams. It is to hang in the club beside that of Mr. Gladstone. Mr. Lloyd George mentioned that he had been a member of the club for over twenty-three years since he first entered it, twenty-five years ago, as "a raw youth from the mountains." Conservatives as well as Liberals subscribed for the portrait.



Photo, Illustr. Bureau.

THE PREMIER HONOURED IN THE FIRST LORD'S CONSTITUENCY: MR. ASQUITH RECEIVING THE FREEDOM OF DUNDEE.

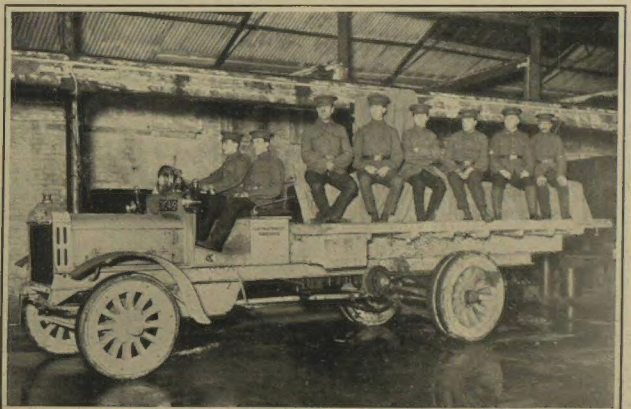
Some 3000 people gathered in the Kinraid Hall, Dundee, on January 30, when Mr. Asquith was presented with the freedom of the city. In the course of his speech the Premier paid a personal tribute to Dundee's present representative in Parliament, Mr. Winston Churchill. He also dwelt on the beneficent power of municipal government. Some Suffragettes interrupted the proceedings. From left to right in the photograph may be seen Mr. Churchill, Mr. Asquith, and the Lord Provost of Dundee.



Photo, Record Press.

THE "WOE WATERS" OF CROYDON REAPPEAR: A CURIOUS QUINQUENNIAL PHENOMENON IN CATERHAM VALLEY.

Every five years (with one exception) for centuries, a curious natural phenomenon has made its appearance near Croydon. A little brook on Welford's Farm, Whyteleafe, becomes a rushing stream, and overflows its banks for miles down the Caterham Valley. It is known as "the Bourne flow," or "Woe Waters," as it was once thought to portend plague, famine, or war. It lately reappeared.



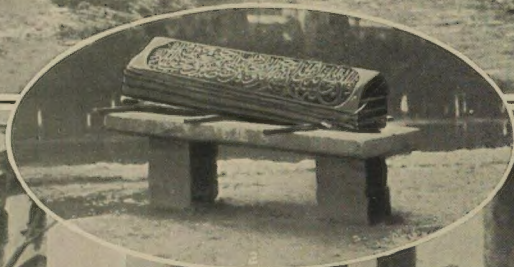
Photo, Record Press.

BRITAIN'S AERIAL DEFENCE AGAINST INVASION: THE FIRST ENGLISH WAR-KITE SQUADRON WITH THEIR MOTOR-LORRY.

Colonel Seely, Secretary for War, mentioned the other day, in the course of his speech accepting the gift of an aeroplane for naval purposes, that great advances were being made in the British military aerial service. The War-kite Squadron shown in the photograph is intended to act in conjunction with the Royal Flying Corps.

AFTER THE YOUNG TURK COUP-D'ÉTAT: THE FUNERAL OF NAZIM PASHA.

PHOTOGRAPHS SUPPLIED BY RECORD PRESS.



1. HONOURING THE DEAD GENERALISSIMO OF THE TURKISH FIELD ARMY, WHO WAS KILLED AT THE OVERTHROW OF THE KIAMIL CABINET: MILITARY ATTACHÉS BEFORE THE SULEIMAN MOSQUE, AT THE FUNERAL OF NAZIM PASHA.

As is, of course, well known, Nazim Pasha, Commander-in-Chief of the Turkish Army recently in the field against the Balkan armies, was shot dead as he came out of the Council Chamber at the moment of the Young Turk "coup-d'état;" some say accidentally, others assert deliberately. The funeral of the dead generalissimo took place

2. AWAITING THE FINAL RITES: THE COFFIN OF NAZIM PASHA.

3. THE BURIAL OF THE FAMOUS TURKISH SOLDIER KILLED DURING THE "COUP D'ÉTAT": THE FUNERAL OF NAZIM PASHA—THE COFFIN AND THE CROWD BEFORE THE SULEIMAN MOSQUE.

on the day after his death, and was attended by, amongst others, the military attachés of the foreign Embassies; Mahmud Shevket Pasha, the new Grand Vizier; and Colonel Enver Bey, the well-known Young Turk leader, who was very largely responsible for the overthrow of the Cabinet.

THE YOUNG TURK COUP-D'ÉTAT: SCENES AT THE SUBLIME PORTE.

PHOTOGRAPHS SUPPLIED BY RECORD PRESS.



1. THE DRAMATIC OVERTHROW OF THE KIAMIL CABINET: DEMONSTRATORS BEFORE THE SUBLIME PORTE.

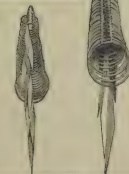
2. OF THE FORCE, SYMPATHETIC TO THE COMMITTEE OF UNION AND PROGRESS, WHICH TOOK THE PLACE OF THE REGULAR TROOPS ON THE MORNING OF THE "COUP-D'ÉTAT": SOLDIERS OF THE UCHAK BATTALION AT THE SUBLIME PORTE.

The photographs given on this page illustrate the "coup-d'état" which resulted, the other day, in the dramatic overthrow of the Kiamil Cabinet and the setting up of a new—and Young Turk—Government, with Mahmud Shevket Pasha at its head. The excitement in the streets seems, by all accounts, to have been slight; indeed, an hour or so after the event there were probably not more than a hundred persons on the steps of the Porte, and about the same number were outside the gate cheering and

supporting the movement by handing round copies of a manifesto; while the rest of the comparatively small crowd consisted obviously of mere spectators. Nominally, the chief cause of the forced fall of Kiamil was the determination not to surrender Adrianople. On the morning of the crisis, the regular guard at the Sublime Porte was replaced by the Uchak Battalion, which is entirely in sympathy with the Committee of Union and Progress.

PAGAN TRIBES OF BORNEO—AS THEY WERE AT THE END OF THE 19TH CENTURY: PICTURES FROM A REMARKABLE WORK.

REPRODUCED FROM MESSRS. CHARLES HOSE AND WILLIAM McDUGALL'S "THE PAGAN TRIBES OF BORNEO," BY COURTESY OF THE PUBLISHERS, MESSRS. MACMILLAN.



1. MAKING A BLOW-PIPE: A KENYAH HEWING OUT THE SHAFT BEFORE BORING IT.
2. MAKING A BLOW-PIPE: KENYAHS ENGAGED IN BORING THE SHAFT.
3. BOWEL TO BLOW-PIPE MAKING: A KENYAH MAKING DART-POISON.
4. THE BLOW-PIPE'S "STING": A KENYAH MANUFACTURING A DART.

5. DETERMINING THE BEST TIME FOR SOWING GRAIN: KENYAHS MEASURING THE LENGTH OF THE SHAFT OF THE ASO DO (THE POLE).
6. OF STOUT RATTANS, AND AFFORDING GOOD PROTECTION AGAINST SWD-STROKES: A FIGHTING-MAN'S WARGAR.
7. SET UP BY KENYAHS TO WARD OFF CHOLERA: WOODEN IMAGES.

With reference to certain of the illustrations here given (from Messrs. Charles Hose and William McDougall's "The Pagan Tribes of Borneo," published by Messrs. Macmillan, and removed elsewhere in this issue), we may make the following notes, quoting from the volumes in question: "The blow-pipe . . . is made by Kayans, Kenyahs, and Punans, and rarely by Ithangs and Klemantans. . . . Having . . . felled the tree . . . the craftsman splits from its long poles about eight feet in length. Such a pole is shaved with the side until it is roughly cylindrical and three to four inches in diameter. . . . A plasterer is erected about seven feet above the ground; and the prepared rod is fixed vertically. . . . The boring of the wood is accomplished by the aid of a straight rod of iron . . . fixing one end and chisel-shaped and sharpened. One man standing on the platform holds the iron rod vertically above the end of the wood, and brings its sharp chisel-edge down upon the centre. . . . He repeats his blow again and again. . . . The rod soon bites its way into the

8. WORN INSERTED ROUND THE MARGIN OF THE SHELL OF EACH EAR: SMALL BRASS RINGS, OF SEA DAYAKS.
9. WITH WHITE DISCS, FORMERLY OF SHELL, NOW OF GERMAN DUNNIP: PLATES WITH TWO PERFORATIONS TO FACILITATE ATTACHMENT: THE TOMB OF A CHIEF OF THE LONG PATAS (KLEMANTANS).

wood. An assistant, squatting on the platform with a bark-bucket of water beside him, lodes water into the hole after every two or three strokes, and thus causes the chips to float out. . . . Six hours completes the boring. In boring the lower part, the craftsman aims at producing a slight curvature of the tube. . . . This curvature is necessary in order to allow for the bending of the blow-pipe, when in use, by the weight of the spear-head, which is lashed to the pipe inside and out, to lash on the spear-head . . . and to attach a small wooden sight. . . . The shaft of the poisoned dart . . . is about nine inches in length and one-eighth to one-sixth of an inch in diameter. . . . The poison is prepared from the sap of the Ipoh tree." Of the scarves shown in illustration No. 8, it may be noted that they are of the same size; one of them has been reduced by us as a matter of convenience. Of illustration No. 11, it should be said that the head-dressing process begins generally within the first month after birth.

10. WITH THE "GIFTS" IN THE SPLIT TOPS OF BAMBOOS: A KLEMANTAN (BARAWAN) OFFERING EGGS TO THE GODS IN RETURNING THANKS FOR HEALTH REGAINED.
11. FLATTERING A BABY'S HEAD: A MALANAU INFANT WEARING THE MOULDING APPARATUS ACROSS ITS FOREHEAD.



DR. GERHART HAUPTMANN.

Author of "The Fool in Christ" (Methuen) and winner of last year's Nobel Prize for Literature.

Photograph by Ruedelers

MR. ELLIS ASHMEAD-BARTLETT.

The well-known War-Correspondent, whose book, "The War in Thrace," is announced by Mr. Heinemann.

Photograph by Elliott and Fry.

Pagan Tribes of Borneo.

The student of anthropology, ethnology, or natural history knows that if his lines should be cast in remote places he has the chance of giving the public an authoritative book; he can place the civilised world in his debt, and he often elects to do so. "The Pagan Tribes of Borneo," by Dr. Charles Hose and Professor William McDougall (Macmillan), is a fine example of the class of work to which we have referred. Published in two volumes, it gives a very complete description of strangely interesting people in their physical, moral, and intellectual aspects. Throughout the books we have first-hand observation, for although the authors have studied the leading works on Borneo, they have used them as guides, and for no other purpose. Dr. Hose, to whose labours the gathering of the great part of the information is due, was for twenty-four years a Civil officer in the service of the Rajah of Sarawak; and of this lengthy period by far the greater part was passed in the Baram district to the south-west of British North Borneo, where nearly all the tribes discussed are represented. His duties as Resident Magistrate placed him on an intimate footing with the people; he was able to secure notes, sketches, and photographs. Professor McDougall came upon

There are more than two hundred plates and several maps. The pagans of Borneo would seem to be of mixed descent. A negrito race originally, they are thought to have mingled with the Hindu-Javanese invaders of Borneo's southern coasts. Chinese traders who came in search of camphor and spices remained and intermarried, and the penetration by Chinese traders into the unexplored interior is still going on. Arabs came, too, bringing the faith of Islam to extensive regions, and Klings from Madras began to reach the country about the middle of the nineteenth

century. Of the six principal groups of pagans, numbering, perhaps, two million people in all, one-half are Klemantans, a comparatively peaceful folk; the Sea Dayaks, who are best known to the outer world, number no more than 200,000, but make up in ferocity for what they lack numerically. The Kayans, who number 150,000, are the chief object of the authors' studies, for they are the most homogeneous of the groups: their beliefs, customs, and art are more interesting and better developed than those of the others; their language, too, is fairly well known to surrounding tribes. They build the best houses: a house may accommodate forty or fifty families and two or three hundred people. Slaves are kept, and it is thought that when public prayer was made in times past, a slave was killed that his soul might carry the prayer to its destination. Happily, a pig suffices nowadays. The morals of the Kayans are distinctly good. They have few blood-feuds; they do not pilfer; and yet they have no words in their vocabulary for justice and injustice! Their belief in collective moral responsibility and vicarious atonement is worth noting, and altogether they show a higher standard of civilisation than any of the other pagan groups, though nearly approached by the Kenyahs. But the



A CUSTOM WIDELY SPREAD IN SOUTH-EAST ASIA: A KAYAN MAKING FIRE BY FRICTION WITH A "PUSA."

"Others of the instruments, arts and customs of the Kayans are found widely spread in South-Eastern Asia. Such are the small axe or adze with lashed head... the making of fire by friction of a strip of rattan across a block of wood."

"THE PAGAN TRIBES OF BORNEO."

BY CHARLES HOSE, D.S.C., AND WILLIAM MCDUGALL, M.B., F.R.S.
Illustrations reproduced by Courtesy of the Publishers, Messrs. Macmillan.



NATIVE METAL-CASTING IN BORNEO: AN IBAN MAKING FIRE-PISTONS.

A fire-piston "consists of a hollow brass or leaden cylinder about five inches in length... closed at one end. A wooden piston... is driven down the cylinder... and is quickly withdrawn. The heat generated by the compression of the air ignites a bit of tinder at the bottom... The cylinder is cast by pouring the molten metal into a section of bamboo, while a polished iron rod is held vertically in the centre to form the bore."—[From "The Pagan Tribes of Borneo."]

the scene later, and for less than one year he would appear to have helped Dr. Hose with the literary side of his labours—no unimportant service, for it is not easy to make such material attractive to the general reader who is not a specialist. The arrangement of the volumes is excellent. Geography and history are followed by a general description of the pagan tribes as they are to-day, and then their social system, agriculture, war, handicrafts, art, and beliefs are treated in turn. Myth and legend follow; morals and ethnology come next; and a valuable appendix by Dr. Haddon, who was in charge of the Cambridge Anthropological Expedition in 1899, brings the second volume to a close.



WHERE THERE ARE NO MATCHES: KLEMANTANS OF BORNEO MAKING FIRE IN THE JUNGLE BY SAWING ONE PIECE OF BAMBOO ACROSS ANOTHER.

"Of all the jungle plants those which play the most important parts in the life of the people are the many species of the rattan and the bamboo; and without them more than half the crafts... of the natives would be impossible."—[From "The Pagan Tribes of Borneo."]

SMELTING AND FORGING IN BORNEO: KALABIT SMITHS USING STONE HAMMERS.

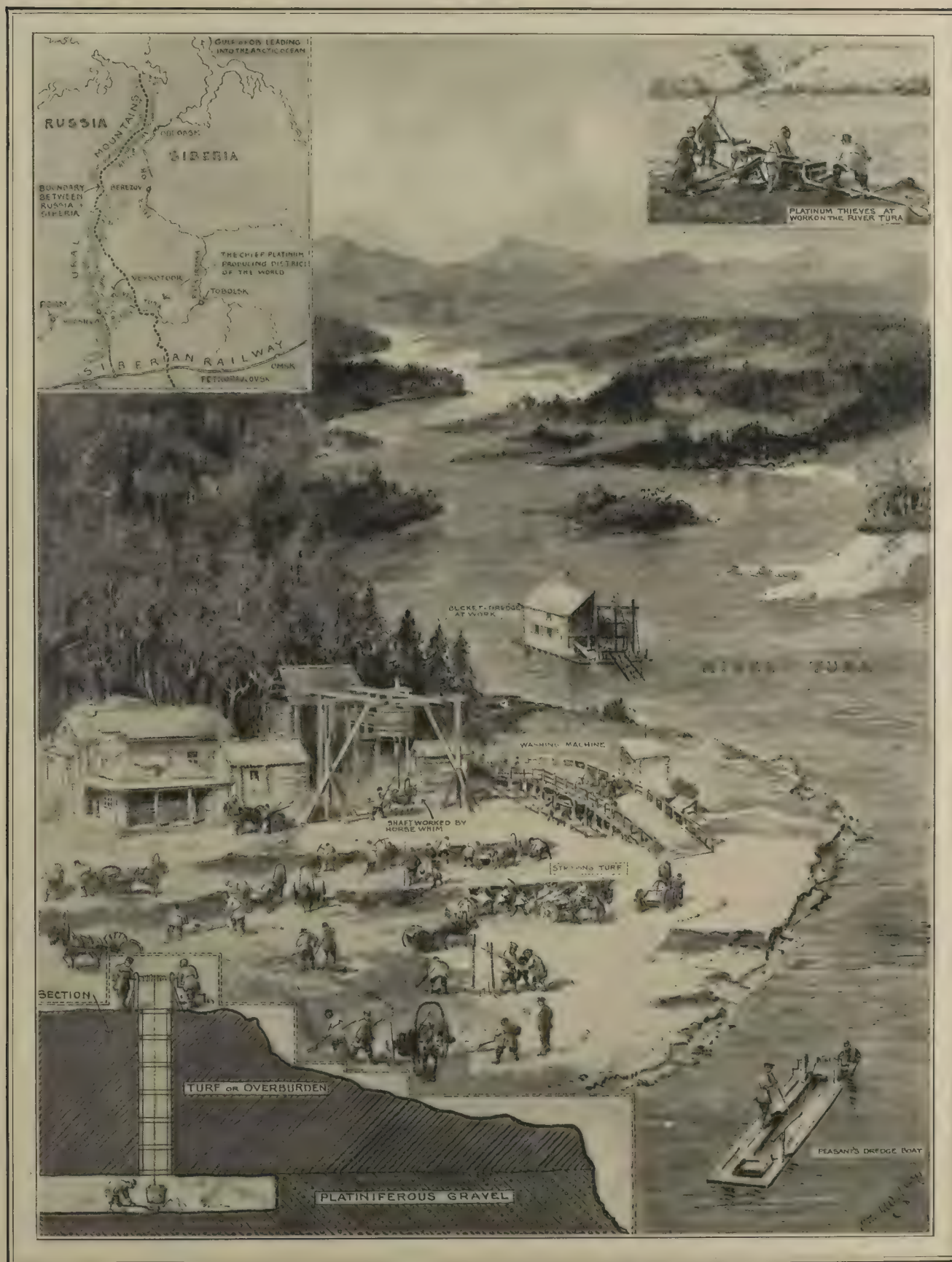
"The smelting is performed by mixing the ore with charcoal in a clay crucible... The charcoal being ignited is blown to a white heat by the aid of four piston bellows. Each of the bellows consists of a wooden cylinder... about four feet in length... fixed vertically in a framework carrying a platform, on which two men sit to work the pistons... Stone anvils and hammers were formerly used, and may still be seen."

From "The Pagan Tribes of Borneo."

authors point out, in the chapter on ethnology, that their grouping is more or less arbitrary, and is intended to depict typical communities of each group—those which present the largest number of group-marks. The interest of the whole work to the general reader lies largely in the fact that the scientific method applied to the consideration of these tribes reveals so many forces at work, shows so many aspects of life, under conditions that our civilisation has but recently endeavoured to regulate. For it is only some sixty years since James Brooke was proclaimed Rajah of Sarawak, which is now as large as England with Wales; and just a quarter of a century since Sarawak and British North Borneo came under British protection.

THE TREASURES BENEATH THE EARTH'S SURFACE: PLATINUM.

RICHES UNDERGROUND; AND HOW THEY ARE GAINED.



VI.—PLATINUM-MINING: WORKINGS IN THE NORTHERN URALS DRAINED BY THE RIVER TURA.

Describing his drawing, Mr. Harold Oakley makes the following notes: "Practically the whole of the platinum mined is found in Russia, and a comparatively small area of less than 2000 square miles in the Northern Urals, drained by the River Tura and its branches, is the principal platinum-producing district of the world. Platinum was first found in the Urals in 1819. From 1828 to 1845, the Russian Government, to encourage the industry, used the metal for coinage. It is now exceedingly valuable, its current price being over £9 per ounce—something more than twice the value of gold. The production for 1910 was 160,000 ounces. In the larger reaches of the Tura river the platinum-ground attains a width of more than half a mile; along the Rivers Iss and Veeya it reaches from 200 to 800 feet from the

stream on either side. The thickness of the platiniferous gravel does not exceed 4 feet: this is covered by turf, or overburden, to depths varying from 5 to 20 feet. The pay-gravel, from open cuttings or shallow tunnels under the turf, is hauled in carts up an inclined platform—as shown in our drawing—over an upright cylindrical tank, about 7 or 8 feet in diameter, which has a floor of iron plate with $\frac{1}{4}$ -inch holes in it—with a central revolving shaft with arms. Here the gravel is washed, and the platinum is won. Platinum is used in the manufacture of crucibles and other chemical appliances—owing to its high fusing-point, 3,080 deg. Fahrenheit, also in the manufacture of electric lights and jewellery, dentistry, etc. I am indebted to Dr. Simon, of Bishopsgate, who recently visited the platinum district, for much information."

DRAWN BY HAROLD OAKLEY.



MUSIC.

LAST week was a notable one in the musician's calendar. It started with a concert by the London Symphony Orchestra, under the direction of Steinbach. Beethoven's Eighth Symphony and Brahms' Second were the chief items, each played with distinction and greatly applauded by an audience that accepted without demur the gross overloading of the orchestra for the Beethoven Symphony, which would have sounded better if no more than two-thirds of the instruments engaged had been employed. The quality of sound is not necessarily improved by additions to its volume. Neither Beethoven nor

Bach, whose Third Brandenburg Concerto has been heard to better advantage in the Queen's Hall, needed the multiplication of instruments that is so popular to-day; but then their message was a living one, clearly defined, and did not need extravagance in dress to hide the possible deformity of figure.

Following the London Symphony Concert came "Der Rosenkavalier" at Covent Garden. It is too late to write at length, or in detail, of this brilliant work, which will reconcile to Strauss many whose sympathies have been alienated by the coarseness of "Feu-

ersnot," the unbridled sensuality of "Salome," the tense unrelieved gloom of "Elektra." "The Rose-Bearer" is not

the soliloquy of the Princess at the end of the first act, and the trio that foreshadows the close of the third. The music-lover who has normal ears, to whom whole-tone scales and unresolved discords are anathema, may approach "The Rose-Bearer" with confidence. There is little to worry and much to delight him—nay, more: there are melodies that

worthy, there is just this much resemblance—that the scenes of both are laid in a country house, and that the action in both turns on the idea of heirship and the family importance of the heir. But apart from that the two pieces differ as completely as chalk and cheese. Whereas, in the Galsworthy drama, talk, character, incident, emotion were all on a genuinely realistic plane, and the plot developed quite naturally, as it were, from the dispositions of normal folk and the clash of their wills, Miss Unger's story is tinged with romantic colouring to the extent that her conversations are often mere rhetoric, her personages act in this way or that because she has planned in advance a certain turn of events, and in general her scheme seems imposed on them, instead of resulting from their tendencies and inter-relations. So that, seriously intensioned as her play is, it is liable to the reproach of artificiality. The hereditary idea, so far as she works it, takes the form—the very improbable form—of a country gentleman's sacrificing the comfort and happiness of the rest of his family to a cult of his eldest son. His daughters must be severed from the men they love and forced into marriages with wealthy libertines; his wife must be neglected, and his younger boy bullied, because sacrifice must be made all round for the sake of the heir. Yet the piece is interesting, and has witty lines and moving passages. Mr. Maurice's tyrannical paterfamilias is better even than his study of the similar part in Mr. Galsworthy's play. Miss Ethel Irving's nervous force and naturalness of style make the interview of father and daughter extremely telling. Mr. Raymond Lauzerte's voluble Frenchman and Mr. Norman Trevor's restrained young Englishman, serve admirably as foils. And Miss Ethel Dane, sad and not glad eyed this time; Miss Cynthia Brooke, and Mr. Max Leeds (in the title-role) also help the play towards success.



Photo. Bassano.
THE CHINOISERIE AT THE ST. JAMES'S:
MISS EVELYN D'ALROY AS TURANDOT,
PRINCESS OF CHINA.

he will carry away with him. In a few words, the opera is a work of many and varied qualities, a great addition to modern music, and one that justifies the claim of Dr. Strauss



"DER ROSENKAVALIER"; FRÄULEIN
MARGARETE SIEMS AS PRINCESS
VON WERDENBERG.



PRINCE CALAF ANSWERING THE PRINCESS'S RIDDLES: "TURANDOT, PRINCESS OF CHINA," AT THE ST. JAMES'S.
Standing, on the left, is Miss Evelyn D'Alroy as Princess Turandot; in the centre is Mr. Godfrey Tearle as Calaf, Prince of Astrakhan.

has been heard on the grand opera stage than

to be regarded as one of the greatest of living composers; but for Claude Debussy, one would say the greatest of all.

and not glad eyed this time; Miss Cynthia Brooke, and Mr. Max Leeds (in the title-role) also help the play towards success.

(Other Playhouse Notes elsewhere.)



Britain's Pride.

FROM THE PAINTING BY NORMAN WILKINSON, R.I., R.O.I.

A FINE ADMINISTRATOR OF THE LAW: THE L.C.J

PHOTOGRAPH BY ERNEST H. MILL



FAMED AS LORD CHIEF JUSTICE OF ENGLAND: THE RT. HON. RICHARD EVERARD WEBSTER, FIRST BARON ALVERSTONE.

Richard Everard Webster was born on December 22, 1842, son of the late Thomas Webster, Q.C.; began his education at King's College School, London, and at Charterhouse, and then went up to Trinity College, Cambridge, where he had a distinguished career. He was called to the Bar at Lincoln's Inn in 1868, and ten years later took silk. An appointment as Tutor and a subsequent one as Postman of the Court of

Exchequer preceded his becoming Attorney-General, a post he held from 1885 to 1886, 1886 to 1892, and 1895 to 1900. From May to October 1900, he was Master of the Rolls; then he became Lord Chief Justice of England. In 1872, he married Louisa Mary (died 1877), daughter of William Calthrop. His daughter, the Hon. Dora Marion married Alfred Shaw Mellor in 1902.

MAKING THE DREADNOUGHT'S BARK DANGEROUS: "FEEDING" THE GUNS.

PHOTOGRAPHS BY COURTESY OF MESSRS. VICKERS, SONS, AND MAXIM.



1. THE CHAMBER FROM WHICH THE PROJECTILES ARE "FED" TO THE GUNS: IN THE SHELL-ROOM—SHOWING THE AMMUNITION-HOIST.

There is so much discussion of the British Navy now that we need offer no excuse for the reproduction of the photographs on this page and on the one which follows it, and additional interest is given to them by reason of the King's recent inspection of the Dreadnought-cruiser "New Zealand." With regard to them, we may quote a few lines from "The Sea and Its Story" (Cassell): "Contrive to crawl below and thence into the barbette. . . . Before your eyes are the runners and breech-mechanism

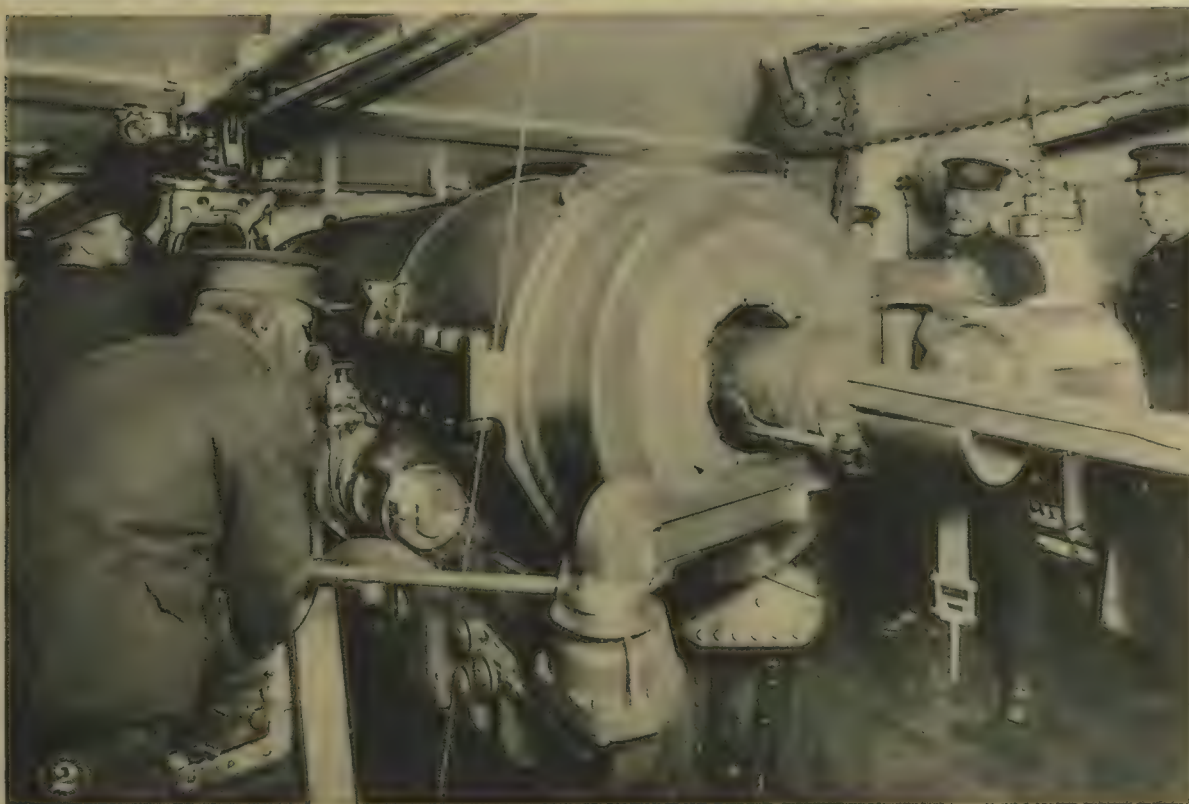
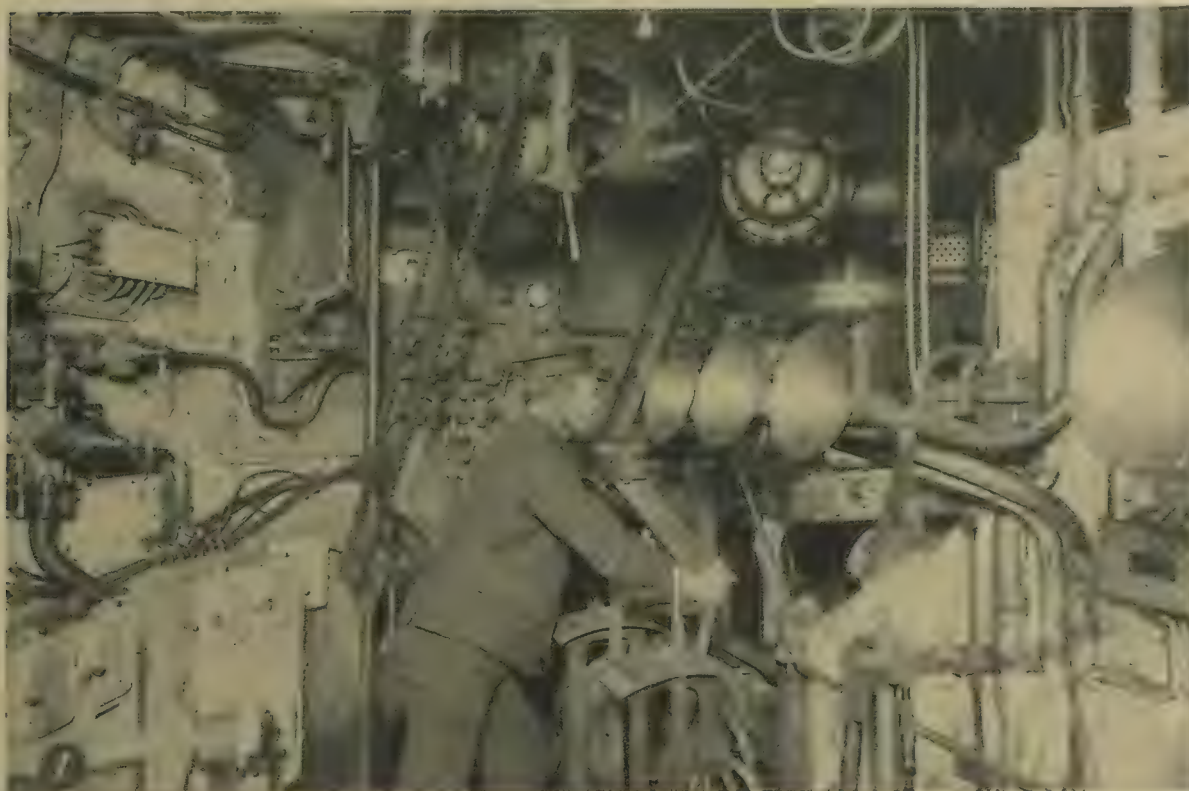
2. IN THE POWDER-MAGAZINE: WORKING THE AMMUNITION-HOIST—WITH HALF THE CORDITE CHARGE FOR A 12-INCH GUN UPON A LIFT.

of one great gun—the other is hidden by a dividing shield. Upon these runners the great gun slides with the recoil, and is forced back into firing position again by the hydraulic cylinders hidden below. Observe immediately behind the breech of the gun the ammunition-hoist, that brings the great shells up an armoured miniature lift from the magazine far below, and pushes each projectile with silent, easy motion into the breech of the gun, which has already opened its capacious maw after the last discharge,

[Continued opposite.

FEEDING THE 12-INCH GUNS: WORKING A DREADNOUGHT'S WEAPONS.

PHOTOGRAPHS BY COURTESY OF MESSRS. VICKERS, SONS, AND MAXIM.



1. THE PLACE FROM WHICH THE AMMUNITION SUPPLY OF A PAIR OF 12-INCH GUNS IS MANIPULATED: THE WORKING-CHAMBER, WHICH REVOLVES WITH THE GUNS.

2. GIVING A GUN ITS DEATH-DEALING MISSILE: RAMMING HOME A SHELL.

Continued. thrown out the remains of the last cartridge, and had its bore cleaned by the compressed-air blast that acts the part of the sponge of former days." Concerning the actual photographs, it should be noted that the shells are taken from the bin by a travelling gripper and conveyed to the ammunition-hoist, which is the same as that used for conveying the cordite charge from the magazine to the guns. Four cases of high explosive—the size of the two shown in the lower photograph on the left-hand page—make a charge for one 12-inch gun. The first photograph on this right-hand page shows the remarkable "working-chamber" from which the ammunition supply of a pair of 12-inch guns is manipulated. From this room, which revolves with them, the guns can be trained by hand should the electric or hydraulic gear be damaged, an accident, of course, quite possible in time of warfare, despite the many and elaborate precautions taken to guard against it and occurrences of a similar embarrassing nature.

BELIEVED TO HAVE BEEN TURNED INTO STONE IN COMPANY WITH AN IMPIOUS TRIBE: A DEAD WATERFALL.

PHOTOGRAPH BY I. MARCHAND.



SILENT AND STILL, YET SEEMINGLY MOVING: THE GREAT PETRIFIED CASCADE OF HAMMAM-MESKHUTIN, ALGERIA.

Some 100 kilometres (62 miles) from Constantine, the ancient Cirta, in Algeria, is this remarkable petrified waterfall, the production of the calcareous deposits from sulphurous and ferruginous mineral springs issuing from the depths of the earth at a temperature of 95 deg. Centigrade. The cascade, still and silent as it is, looks for all the world like running water, and, as a matter of fact, there is still an abundant flow from the sources which gave it birth. Centuries have, of course, gone to the making

of the deposits, and the springs were well known to the ancient Romans. The name Hammam-Meskutin means "the bath of the damned," in allusion to a legend which says that the waterfall was petrified when Allah, punishing impious people, turned the members of a tribe into stone. At night, so the story runs, these stone dwellers in the remote past come to life and resume their normal shapes. Constantine, which gains its name from the fact that Constantine rebuilt it, was captured by the French in 1837.

FINER THAN HAMMAM-MESKHUTIN: STONE CATARACTS IN ASIA.

PHOTOGRAPHS BY EDMOND MERCIER.



SHAPED BY THE FALLING OF MANY WATERS: TERRACES, STILL YET SEEMINGLY FLOWING, OF THE STONE CASCADES OF PAMBUK KALESSI.



A WONDER OF THE BIRTHPLACE OF EPICETUS: PETRIFIED CASCADES AT PAMBUK KALESSI, THE ANCIENT HIERAPOLIS, IN ASIA MINOR.

It is claimed that the petrified cascades of Pambuk Kalesi, in ancient times Hierapolis, a city of Phrygia, are even more remarkable than those of Hammam-Meskhutin. Hierapolis was so famous for its hot springs and cave, Plutonium, that

it was held sacred by the old Romans. It has further claim to fame in that it is the birthplace of Epictetus, the famous Stoic philosopher, who taught philosophy in Rome until 94 A.D., when he migrated to Nicopolis, in Epirus.

FASHIONED MORE SPEEDILY THAN PETRIFIED FALLS: A FROZEN TREE.

PHOTOGRAPH SUPPLIED BY E.N.A.



BOWED UNDER THE YOKE OF WINTER: A SNOW-LADEN TREE AT NIAGARA FALLS—A REMARKABLE PHOTOGRAPH.

Nature, the artist, is responsible, need we point out, for many very beautiful works. A great number of them, such as the petrified waterfalls illustrated in this Supplement, take centuries in the making; others are the creations of moments. Of the latter we here present an excellent example, a case in which Dame Nature has been aided by her skilled craftsman, Jack Frost.

PETS DRINKING THE WATERS: A REMARKABLE SCENE AT AIX-LES-BAINS.

DRAWN BY OUR SPECIAL ARTIST, A FORESTIER



DOGS TAKING THE CURE: A PRINCESS'S FAVOURITES BROUGHT BY MOTOR-CAR TO THE PUBLIC FOUNTAIN FOR THEIR DAILY DRINK OF THE WATERS.

In front of the Etablissement des Bains at Aix-les-Bains is a public fountain, from which flow three different kinds of natural curative waters. At this those who choose may take the waters, following general directions given by a printed notice on the fountain itself, but, if they are wise, consulting a doctor first. The incident here illus-

trated took place recently, and shows the pet dogs of a Russian Princess brought to the fountain by a servant that they might imitate their mistress by taking the cure. The visit was paid daily by motor-car. It cannot be said that the dogs looked as though they needed such medical treatment, for they were liveliness itself.

A Cruiser Doing the most Difficult Work the British Navy Faces To-day.

Photo, Crick.

ON VERY ARDUOUS DUTY IN ROUGH WEATHER: H.M.S. "PERSEUS," WHICH WAS REPORTED TO HAVE LOST A CUTTER THE OTHER DAY, ENGAGED IN STOPPING GUN-RUNNING IN THE PERSIAN GULF.

It was announced the other day that a telegram had reported that a cutter and her crew were missing from H.M.S. "Perseus." At the moment of writing there is no favourable news, and it is supposed that the little craft was attacked by those gun-runners of the Persian Gulf whose operations it is the duty of the "Perseus" and other vessels to stop, for the protection of our Eastern Empire. The work is undertaken at the desire of the Indian authorities and is very far from easy. Thousands of rifles, with much powder, or its component parts, have been captured from time to time.

The 98.25 per Cent. Irish Election: The Remarkable Political Contest in Londonderry.

Photos: Topical and Illustrations Bureau.

1. A WARNING THAT PEACE MUST BE KEPT DURING THE BYE-ELECTION: THE REMARKABLE PROCLAMATION POSTED ALL ABOUT LONDONDERRY.

3. HOW IT WAS MADE POSSIBLE FOR 98.25 OF THE REGISTER STRENGTH TO VOTE: A PARALYSED MAN BEING LIFTED OUT OF A MOTOR-CAR AT THE POLLING BOOTH, THAT HE MIGHT VOTE.

2. AFTER THE DECLARATION OF THE POLL: COLONEL PAKENHAM (UNIONIST, THE UNSUCCESSFUL CANDIDATE, "CHAIRIED" BY HIS SUPPORTERS.

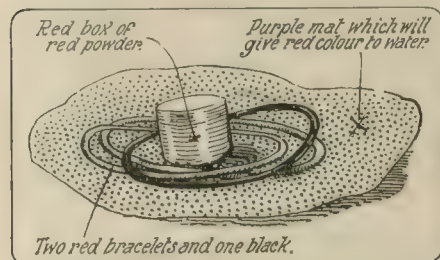
4. A SHOW OF FORCE WHICH, HAPPILY, PROVED UNNECESSARY: ROYAL IRISH CONSTABULARY, DRAFTED INTO LONDONDERRY FOR THE 'BYE-ELECTION, HAVING THEIR RIFLES INSPECTED.

The recent bye-election at Londonderry, which resulted in a majority of 57 for Mr. David C. Hogg, the Home Ruler, was remarkable in several ways, but chiefly, perhaps, for the fact that the votes were 98.25 of the registered strength; indeed, excluding emigrants and the dead, the percentage was 99.25. To gain such a result, both sides worked singularly hard, and many invalids were brought to the polling booth and carried in to give their votes. The voter shown, for example, is paralysed, and had not left his bed since he voted in 1910. The proclamation illustrated announced that the Constabulary had received instructions to take prompt measures to prevent and, if necessary, disperse by force assemblies from which a disturbance of the peace might be apprehended.



VIGNETTES OF EMPIRE.—X.: CALCUTTA AND DARJEELING.

WHEN, according to legend, the dead body of Kali, the wife of Siva, was chopped in pieces by the disc of Vishnu, one of her fingers fell on the bank of what is now called the Tolly Nullah, an old bed of the Ganges. A temple was built thereon to the goddess, the place was called Kalighat, and gave its name to the city which was for nearly a hundred-and-fifty



"THIS SET FOR THREE PICE!" A FARTHING'S-WORTH CONSISTING OF A BOX OF RED POWDER, A PURPLE MAT, AND THREE BRACELETS.

years to be the capital of India. The temple lies some distance south of the English Cathedral. The Calcutta St. Paul's has a west window designed by Sir E. Burne-Jones, but the Kali temple is without any decoration of artistic value, a surprising fact if the stories are true of the great wealth amassed by its proprietors. Blood sacrifices are still offered here to "Mother Kali"—goats and kids frequently, and occasionally buffaloes—and the upright wooden forks into which the necks of the victims are forced before decapitation are shown in our illustration. The wife of Siva is here venerated in her least agreeable aspect. She is here not Uma, the type of beauty; nor Jagan-matri, the mother of the universe; nor Parvati, the mountaineer; nor Durga, the warrior. She whose valiant deeds included the slaughter of giants is here propitiated as a cruel deity whose wrath can only be appeased by offerings of blood. And we in England are not so far removed from the ranter's revel in the physical tortures of hell-fire and brimstone that we can expect the cult of Kali the cruel to be relegated to the back numbers of religious history in India.

The passage from Rangoon is not always so smooth as I found it upon the *Bengala*, which is said to be the most comfortable of the British India Company's fleet. Our captain had been skipper on the *Fraser* when Mr. Ajjat Sing was being deported for sedition, and he told me that in a spell of really bad weather the exile declared to him: "Sir,

I'll never say another word against the Government if you'll only take me back to land."

It is only possible in the short space here at disposal to name the salient features of Calcutta. The huge city has a great open park called the Maidan, with the Viceroy's house at one end and the racecourse at the other. On the middle of its riverside is Fort William, and opposite to this, on the other side of the Maidan, is "Chowringhee," with hotels, clubs, stores, and English residences. Out on the sward rises the Ochterlony monument, a tall, fluted column, on an Egyptian base, from the top of which you can get some idea of the extent of the town. Nobler among its buildings rises, with its magnificent tower, the High Court, erected after the model of the largest of the town halls of Flanders, that at Ypres. To the north, beyond Dalhousie Square and the fine buildings of the Bengal Secretariat, stretches a dense network of native streets rarely visited by the tourist. In the neighbourhood of Beadon Square in this northern part of the city I saw performances at three large Bengalee theatres, where such actors as Kasi Nath Chatterjee and Miss Tara Dasse are of the highest excellence.

Of public monuments in Calcutta, the most interesting to the English visitor is the elegant white marble obelisk in memory of the Black Hole victims, which

as yet connects the two banks. The winter visitor to Calcutta, who may even find the temperature low enough to permit at least ladies such enhancement to their charms as the wearing of furs, will not easily realise the longing for the hills that comes over the English resident later in the year. If, however, he is fortunate enough, as I was, to find unclouded skies, his first days at Darjeeling, however much he may have travelled among wonderful scenery, will give him a glow of enthusiasm as he beholds the mighty



A CURIOUS METHOD OF MAKING OFFERINGS TO AN INDIAN DEITY: VOTIVE STONES TIED TO THE BRANCH OF A TREE.



WHERE A CRUEL GODDESS IS PROPITIATED: THE PLACE OF SACRIFICE BEFORE THE SHRINE OF KALI AT KALIGHAT, SHOWING THE WOODEN FORKS FOR HOLDING THE NECKS OF VICTIMS.

peaks of the Himalayas, hardly to be surpassed in the world. The lofty peaks of Kinchinjunga and his neighbours, seen from the distance of forty or fifty miles, seem to hang in the sky in a supremacy of grandeur, and by an early morning ride of six miles to the top of Tiger Hill, a higher vantage ground gives a chance of seeing at sunrise even the top of Everest.

There is much of more human interest also to the stranger at Darjeeling. In the bazaar, especially crowded on Sunday mornings by the workers on the tea plantations, you meet Kashmiris, Lepchus, and Nepalese. There is a small Lama monastery near the town with its rows of prayer-wheels fastened to the wall without under wooden eaves, and inside on an upper floor above the shrine, with its rows of clean-looking, water-filled brass bowls, the grotesque wooden masks and brocaded silk dresses for the priest-dances. I saw one day a rather elaborate dance by Tibetan peasants on an open space of grass, an old traditional performance called the "Amban dance," which is supposed to represent the homage of a group of villages to the "Amban," an emissary of the Chinese Government, and which included a number of grotesque mythological creatures such as a peacock, a turtle, and two fearsome-looking dragons. The dance was executed with great gusto, and an obvious sense of humour, which more than compensates in the Tibetan for a reputed carelessness in the matter of personal ablutions.—A. HUGH FISHER.



ONE OF THE MOST TRAGIC SPOTS IN INDIA: THE ACTUAL SITE OF THE BLACK HOLE OF CALCUTTA.

was re-erected near the Customs House by Lord Curzon after the original which was put up by J. Z. Holwell, a survivor of the tragedy. The actual site of the prison in Old Fort William, known as "The Black Hole"—in which 146 British inhabitants of Calcutta were confined on the night of June 20, 1756, and from which only twenty-three came out alive, a place so accursed that even the river has receded from its vicinity—is now paved and the pavement surrounded by an iron railing.

On the west side of the river jute-mills and engineering works give employment to a vast population of labourers, and it is on this side that is situated the handsome Howrah railway station, the terminus of the East Indian Railway. Only a single bridge



RE-ERECTED BY LORD CURZON AFTER THE ORIGINAL BY A SURVIVOR: THE WHITE MARBLE MEMORIAL TO THE BLACK HOLE VICTIMS.

POLITICAL ALLUSIONS IN TIBETAN PANTOMIME: THE "AMBAN" DANCE.

DRAWN BY A. HUGH FISHER.



"IMPERFECT ABLUTIONERS," BUT BLESSED WITH A SENSE OF HUMOUR: TIBETAN PEASANTS EXECUTING A GROTESQUE FOLK-DANCE AT DARJEELING.

"I saw one day," writes Mr. Hugh Fisher, "a rather elaborate dance by Tibetan peasants on an open space of grass, an old traditional performance called the 'Amban dance,' which is supposed to represent the homage of a group of villages to the 'Amban,' an emissary of the Chinese Government (the figure with a peacock-feather in his hat), and which included a number of grotesque mythological creatures such

as a peacock, a turtle, and two fearsome-looking dragons. The dance was executed with great gusto, and an obvious sense of humour, which more than compensates in the Tibetan for a reputed carelessness in the matter of personal ablutions. . . . The turtle in the foreground is devoured by the two scarlet-jawed dragons, the child-performer slipping out of the bamboo framework for the latter to be gobbled up."

SCIENCE, AND

NATURAL HISTORY

THE DISCOVERY OF -
THE PENDULUM -GALILEO WATCHING -
THE SWINGING LAMP -
IN PISA CATHEDRAL -MEMBER OF THE FIRST ADVISORY COUNCIL
FOR THE SCIENCE MUSEUM: SIR WILLIAM
HENRY WHITE, K.C.B., F.R.S.Sir William White, the famous naval archi-
tect and engineer, was Director of Naval
Construction and Assistant Comptroller of
the Navy from 1885 to 1902.

Photograph by Russell

SCIENCE
JOTTINGS.THE SUBMERGED
CONTINENT

EVERYONE, one
fancies, must
have heard from
one source or
another of the
Atlantis legend
first met with
in Plato. In the
"Timæus" and
its continuation,

the "Critias," we are told how there was once a huge island outside the Pillars of Hercules or Straits of Gibraltar, and how this island sent forth a pirate race which raided all the lands on each side of the Mediterranean until its own country was blown up and sank into the sea as the result of a terrific volcanic eruption like that which occurred in our own time in the Straits of Sunda. Much nonsense has been talked from time to time about this story, which Plato attributes to the priests of Sais in the Egyptian Delta; and the opinions of the learned are divided as to whether it is really the relics of an ancient tradition, or was made up by Plato for the sake of giving point to his philosophic dream of a well-ordered State.

Just outside the Straits of Gibraltar, the sea sinks suddenly to a depth of 4000 metres (about 13,000 feet);

the Azores which has had to be done more than once in fishing for lost submarine cables, has always brought to the surface fresh fragments of rock, evidently of volcanic origin.



Photo, Tetrax.

CONTRIBUTING TO THE SPEED OF TRAINS: THE CON-
VEYER HAULING COAL UP TO THE SHED IN CONNEC-
TION WITH THE AUTOMATIC COALING OF ENGINES
AT CREWE.

particularly, with Brazil. Between these two continents there flowed the Mediterranean, which may not have been quite in its present place, and which certainly after passing what is now Gibraltar turned considerably to the south. These continents existed, according to Professor Suess and others, at a time which lasted well into the Tertiary Age.

Other facts there are which lead one to think that the more southern of these continents may only gradually have disappeared beneath the sea, and that some part of it may have survived into fairly recent times. M. Louis Germain has shown that the land fauna, and particularly the molluscs of the four groups of islands, the Azores, Madeira, the Canaries, and the Cape Verd, are all of them similar to those of the countries round the Mediterranean in Quaternary times, and differ completely from those of Equatorial Africa. He has also shown that a particular family of molluscs, called *Oleacinidae*, still exist in Central America, the Antilles, the Mediterranean basin, and, again, in the four groups of islands just mentioned. From these and other facts,

There can, therefore, be little doubt of the existence of a great continent below the sea dotted with mountains and scarred with volcanoes in much the position described in Plato's legend; but was it ever above it? Geology shows that it certainly was, and that there were at one time two great strips of land connecting, on the one hand, our own country with Canada and Central Europe with the United States, and, on the other, North Africa with South America, or, more



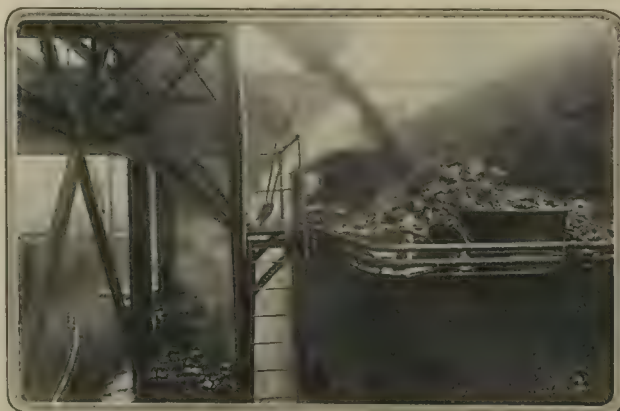
Photo, Topical.

AUTOMATIC COALING OF ENGINES: THE INGENUOUS APPARATUS FOR
DISCHARGING COAL FROM TRUCKS—THE TRUCK UPRIGHT ON THE LINE
BEFORE THE DISCHARGING OF ITS LOAD INTO THE CONVEYER.

Photo, Topical.

AUTOMATIC COALING OF ENGINES: THE INGENUOUS APPARATUS FOR
DISCHARGING COAL FROM TRUCKS—THE TRUCK ALMOST UPSIDE DOWN
WHILE UNLOADING ITS CONTENTS INTO THE CONVEYER.

it rises again suddenly to form the base of the island of Madeira; it sinks again to 5000 metres between Madeira and the southern islands of the Azores, round which its depth is not so much as 1000 metres; then it continues for a considerable distance to the south-west at a depth varying between from 4000 to a great deal less than 1000 metres, the shoals being always sudden and without warning. After this we get a fairly constant depth of about 5000 metres until we touch the Bermudas, from which there is a submarine shelf rising from 4000 metres of deep sea, and finishing up on the coast of America. All this points to the existence of a great submarine continent somewhere off the coast of Africa of the mountains of which the islands of the Azores seem to be the peaks. That it is or was also the scene of great volcanic energy cannot be doubted; for Tristan da Cunha, St. Helena, Ascension, the Cape Verd Islands, the Canaries, and Madeira itself are all of them volcanic in their origin, being principally composed of lava, while the dredging in the deep sea to the north of



Photo, Tetrax.

FILLED IN UNDER FIFTEEN MINUTES: A TENDER RECEIVING COAL FROM THE SHED—
TEN HUNDREDWEIGHT AT A TIME.

This method of automatic coaling is in use at the London and North-Western Railway's yard at Crewe. The coal is discharged from the trucks to the conveyer, which hauls it up to the shed, in which 300 tons can be stored. From there the coal is shot down to the tenders, ten hundredweight at a time, and is weighed automatically during that process.

it seems to him that there was once a continent in mid-Atlantic which sank beneath the waves—the four groups of islands on our side, and the Bermudas on the other, being the remains of mountain ranges which were naturally submerged last.

There is, therefore, no reason why a large island of which these four groups are the mountain-peaks should not have existed off the northern coast of Africa in times recent enough to have left some memory of it among Mediterranean peoples, particularly if its disappearance was attended by such a catastrophe as the eruption of a huge volcano. In the words of M. Pierre Termier, the Director of the Geological Survey of France, from whose recent lecture to the Paris Institut Océanographique many of the above facts are taken, any further proof of its existence must be looked for in the labours of the anthropologists, and in the work of oceanographers like the Prince of Monaco and our own Sir John Murray.

F. L.

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ART NOTES.

IT is difficult, under the circumstances, to be indignant with the London County Council for not assisting the architectural scheme in Trafalgar Square. It would cost, they say, from a quarter to half a million to open up a proper view of the Admiralty Arch. Does any citizen insist, at the price? But it is obviously absurd that one set of officials should build an arch on the strength of a view, and that another set of officials, speaking the same tongue and serving the same city, should block that view. From the first a tangle of red tape has spoiled any chance of a fine centrepiece to London. The arch itself is half a concession to the utilitarian clerk. It springs from the ground full of good intentions, as if it were about to lift some boast of decorative uselessness to heaven; but before the end its pride, which is the proper character of arches, is humbled. The upper portion is pierced all over with compromising windows, at which, I doubt not, if the London County Council allows a clearing of the view, the staff will be seen performing the less important business of the Department daily from ten to four. Instead of being a triumph, or, at least, a showy way of entrance from the Square to the Palace, the thing becomes a bad example of a style that may be termed the Red Tapering.

The Modern Society of Portrait Painters creates the expected half-dozen or so sensations at the Institute Galleries. Mr. George Lambert's "The Actress" has its satyr and snows, and angels and an evening gown. Mr. Philpott contributes a "Head of a Negro." Mr. Cobell "A Chet," Mr. Ranken a "State" portrait of Lord and Lady Poulett, Mr. Kelly "Mrs. Fleischmann and Rosemary," and Mr. Eric George an imaginary portrait of the composer Gallucci. The majority of them are determined to evade the commonplace of

setting and manner. But the originality of this Modern Society is in the nature of a disguise. One detects old friends under the masks and dominoes of 1912. Here is commonplace rigged up, and a stale vision strutting through a new part. There is nothing in Piccadilly half so fresh as El Greco, albeit these are the young painters who have discovered Sargent and, as they believe, gone forward. Being the last of the realists, they are necessarily

All the advantages of position are Sir William Richmond's in his "Great Artist and Little Critics." He attacks a dwarfish race, from the heights, and is, moreover, a practised shot. One can see he has discovered the initial absurdity of a title which claims for the "art critics" an ability to censure art! He exposed them, when they praised the Post-Impressionists; he exposes when they blame Alma-Tadema. He is always criticising them!

The one weakness of his attack is that it was ever made. Not only does he prove in it that he himself is "apt to censure," but he proves that he is himself a critic in the looser sense of the term. When he calls Alma-Tadema "a great artist" he is making an estimate, and, as it happens, making an estimate that nobody but small critics have endorsed. I cannot, at any rate, put my hand, in my own library, on a lasting tribute to his "great painter." Other great painters are singularly silent as to his merits. The most familiar comment is Whistler's ribald allusion to "a Romano-Greek St. John's Wooden eye." On the other side, what is there? Did Ruskin write great prose for him; did Rossetti, or Watts, or Burne-Jones, or any great contemporary, delight in him? Sir William must take the field seriously as a critic before he can prove his case; he stands alone. E. M.



COMMANDING A MAGNIFICENT PANORAMA OF THE ENGADINE VALLEY: SUVRETTA HOUSE,
THE GRAND NEW HOTEL NEAR ST. MORITZ.

Suvretta House, situated within a mile of St. Moritz, stands in its own grounds, 6500 feet above sea-level, on the southern slope of one of the grand snow-capped mountains which form the Bernina and Julier groups extending towards Lake Como. It is well sheltered from bleak winds, and enjoys the sunshine practically all day. There are facilities (with instructors) for all kinds of winter sport—ski-running, tobogganing, and skating, while there are excellent golf links close to the hotel, and good fishing can be had in the adjoining Camfer Lake. Architecturally, the hotel is of the massive and solid type, while within is to be found the maximum of luxurious comfort under hygienic conditions. Suvretta House is under the management of Mr. A. Bon, whose name is a guarantee for the quality of the cuisine and wines. A London bureau for inquiries has been opened at 108, Strand.

somewhat less interesting than the first, of whom, by the way, the most interesting appreciation that has yet appeared in England was published last week.

Arthur J. Elsle's "As Good as Ever" and "A September Morning," by Sam Reid, R.S.W. Particulars of the scheme may be had from Messrs. Bovril, Ltd., 152-166, Old Street, E.C.

Fill the Conductor's Place.

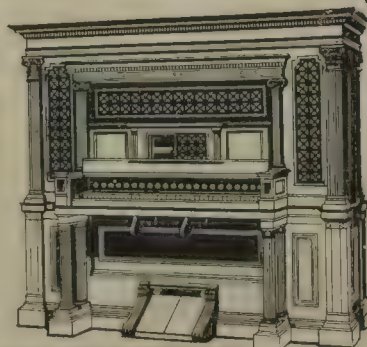
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WILLS AND BEQUESTS.

THE will (dated Nov. 18, 1896) of MR. ROBERT ORMSTON LAMB, of Hayton House, Cumberland, chairman of the Northumberland Coal Owners' Association, who died on Dec. 26, is proved by Mrs. Helen Lamb, the widow, and Everard Joseph Lamb, son, the value of the estate amounting to £264,652 10s. 5d. The testator gives all his real estate to his son; £500, an annuity of £1000, and during widowhood the use of the Stonehouse estate, to his wife; £200 to his sister; £200 each to Stephen Eaton Lamb and Edmund George Lamb; and the residue of the personal property to his children.

The will of MR. ARTHUR McDougall, of The Cottage, Bramhall, Chester, and of Manchester, corn-miller, who died on Dec. 6, is proved by his son Robert McDougall, the value of the real and personal estate being £199,539. He gives £500, the household and domestic effects, and an annuity of £700 to his wife; and the residue to his said son.

The will of MRS. SARAH ANN WARD, of Askham Bryan Vicarage, Yorks, who died on Oct. 12, is now proved, the value of the estate being £53,093 2s. 7d. She bequeaths £4000 to the Cancer Hospital; £150 to the Men's Convalescent Home, Rhyl; £1000 to the Rev. Otho W. Steele; £100 to Mary Squire; £50 each to Norman M. Brittain, William Mannix and Maria Mannix; an annuity of £52 to John Richards; and the residue of the personal property to her husband, the Rev. George Nussey Ward. All

her real estate she leaves to her husband for life, and then for her cousins, Elizabeth Ann Bennett, the Rev. William W. Tyson, and the Rev. John Bennett Tyson, and, on the death of the survivor, for the children of the Rev. John Bennett Tyson.

The will (dated Oct. 21, 1912) of MR. EDWARD HERBERT BAYLDON, D.L., J.P., of Oaklands, Dawlish, who died on Dec. 19, is proved by George Allen Higlett, the value of the estate being £100,000. The testator gives

and Exeter Hospital; and legacies to servants. On the decease of Mrs. Bayldon he leaves £5000 to his nephew Philip Bayldon; £1000 to his sister; £5000 each to his brothers Daniel Henry and Thomas Cook; and £1000 to his niece Winifred. The residue goes to his sons Owen Hague Bayldon and Robert Corbett Bayldon.

The will and codicils of MR. PAXTON WILLIAM PARKIN, of Sharrow Bay, Westmoreland, who died on Nov. 1, are proved by the widow and George Forbes Bassett, the value of the property being £66,751. The testator gives £3500 to his daughter Hilda Margaret Parkin; £3000 to his daughter Dorothy Gladys Whitehead; £2000 to his wife; £500 to G. F. Bassett; £400 to Robert Cecil Bassett; £200 to James Newman; and the residue to his wife for life and then in trust for his two daughters and their issue.

We learn that the Brinsmead Free Open Piano Scholarship at the Modern School of Music has been gained by Miss Millie Jackson, aged thirteen, a pupil of Mr. Isador Epstein, the Principal. The adjudicator was Mr. John Francis Barnett, Professor of the Royal College of Music.

Cricketers — will find the 1913 edition of John Wisden's "Cricketers' Almanack" of exceptional interest, as this is its jubilee year, and it contains a portrait of its founder, John Wisden, with some reminiscences of that famous bowler by Sir Spencer Ponsonby-Fane, Sir Kenelm Digby, Sir H. M. Plowden, Canon McCormick, and the Rev. H. B. Biron. The records of last year's triangular Test Matches also, of course, make this edition specially useful.



THE MIGHTIEST BATTLE-SHIP YET LAUNCHED: BRAZIL'S NEW £2,000,000 DREADNOUGHT, "RIO DE JANEIRO," ARMED WITH FOURTEEN BIG GUNS.

The new Brazilian battle-ship, "Rio de Janeiro," was launched the other day from Sir W. G. Armstrong, Whitworth, and Co.'s shipyard at Elswick, Newcastle-on-Tyne, the ceremony being performed by her Excellency Madame Huet de Bicellar, wife of Admiral de Bacellar, of the Brazilian navy. The "Rio de Janeiro" is the most powerful war-ship that has yet been placed on the water. Her armament is enormous, including fourteen big guns. Through her funnels two railway trains could pass abreast. Interesting features of her construction are the extra top in the centre with the searchlights, and the secondary battery on the main deck. The vessel cost about £2,000,000. — (DRAWN BY CHARLES J. DE LACY)

£500, and during widowhood the use of Oaklands and £2000 a year, to his wife; £750 to Edith Mary Barnett; £300 a year to his sister Elizabeth Sarah Bayldon; £100 to the Dawlish Cottage Hospital; £200 to the Devon

and Exeter Hospital; and legacies to servants. On the decease of Mrs. Bayldon he leaves £5000 to his nephew Philip Bayldon; £1000 to his sister; £5000 each to his brothers Daniel Henry and Thomas Cook; and £1000 to his niece Winifred. The residue goes to his sons Owen Hague Bayldon and Robert Corbett Bayldon.

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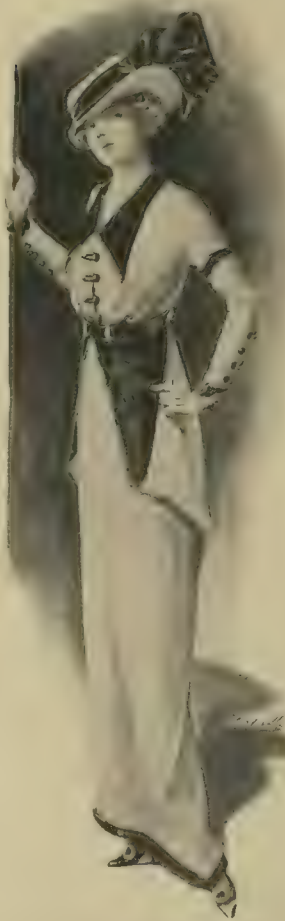


LADIES' PAGE.

A NOVEL action at law has recently been heard in France, and now has a sequel pending. The wife of a man with an income of 28,000 francs per annum brought an action to compel her husband to allow her one-fifth of his annual revenue for her personal use, and the tribunal of the Ninth Arrondissement decided that her claim was valid under a law passed in 1907 "to regulate the contributions of spouses to the charges of married life," and ordered the husband to pay the amount claimed to his wife. He has not taken it kindly, but has proceeded to institute an action for divorce, on a ground not admitted in our law, but valid in French law—namely, that of "grave insults, publicly offered," which insult he declares to be inherent in his wife's demand for an allowance fixed by law. It remains to be seen what will be the decision in this divorce suit; but, as men like to think that they owe nothing definite, but give just what they see fit to their wives, many men may agree that the claim that a wife has a right to a fixed proportion of her husband's income which he must not deny her is "a grave public insult."

In France, indeed, as in nearly all civilised countries but England, the family property rights in the possessions of its head are so far admitted that a married man is not allowed to bequeath to strangers the whole of his fortune. But nowhere, unless the Paris decision holds good, can a wife claim a fixed allowance by law, either while she lives with her husband or when she leaves him without due cause. He is always free to give or to withhold at his good pleasure or his bad temper. In short, women in marriage practically live after the communistic ideal; they are expected to give all their time and strength in return for being supplied with what they require—"From each according to his powers; to each according to his needs." But this is doubtless impracticable as a basis for society as a whole, and does not always work out well, even in domestic life.

Certainly, the problem presents complications. Many a man has an idle, useless, or stupid wife, whose value as a worker in his home is very small or non-existent; yet he has to endure her inefficiency, and give "according to her needs," while what he receives, if "according to her powers," moral or physical, is very unsatisfactory. Then, on the other hand, the wife, or at any rate, the affectionate, good mother, cannot measure her recompense in terms of money. Most emphatically, domestic love "blesseth him that gives and him that takes," and the over-taxed but beloved mother, getting shabby clothing and simple food as all return in money value for her constant work in her home, has a recompense in the things of the spirit that she would not for a moment be willing to exchange for the easier life and better pay of the successful business woman alone in the world. But, at the same time, money for personal use, to spend or save at will, is the basis of independence and self-respect, and



A CHARMING COSTUME.

A graceful design for a slender figure.

indispensable to the happiness of a rational adult person. Alas! as is usually the case where the sense of justice and free-will kindness of humanity is left alone to work, it sometimes happens that a moral claim is ignored. Meanness sometimes—love of power sometimes—positive dislike and spite sometimes—can make husbands stingy and disagreeable!

There are homes where every item of personal expenditure for "mother" or "the girls," even on positive necessities such as clothing suited to their social station, causes a painful scene of insult and distress. There are married women, even some who are ostensibly mistresses of great establishments, who never, from one year's end to another, have a five-pound note at their own disposal. There are others who are compelled to ask humbly and painfully for a few shillings now and again for postage-stamps and train-fares. Crowning and cruellest injustice of all—the English wife who has devoted her youth and maturity to her family duties may be left in her later years penniless by her husband's will, or very poor, while his fortune is bequeathed to some charity or to some other set of people.

One may see now, in a great national exhibition in London, pictures and furniture worth many thousands of pounds left to the nation by a man whose widow was, by the same will, only to receive a pound a week for life, and even that only if she did not reside with a relative. One of the large professional charities recently received a great bequest for annuities to aged and sick workers, while the elderly wife of the testator was left penniless. So does the communistic basis of the wife's position sometimes work out practically. Of course, it usually runs at least fairly satisfactorily; and unquestionably the great majority of young women prefer to take their chance in marriage to working for their own money as *femmes seules*. Yet the present position causes a mass of suffering, too.

The width of the skirts of the new season's tailor-made gown is really all that comfort and commonsense could demand. While appreciably wider than of recent years, there is still no unnecessary material to get in the way or give undue weight hanging upon the hips. Many of the smartest models are quite short, and these are being much patronised by younger women. It needs a slim figure to look really well in an abbreviated skirt, but the wearing of a garment that does not need to be held out of the dust when walking in the street is a luxury that is far too keenly appreciated to be willingly dispensed with. Some very smart tailor-made skirts this spring will show the revival of an old style—inverted pleats at the back. These do not at all disturb the close-fitting effect, yet give great freedom of movement. An original method of arranging the basque of the coat is shown in our illustration. The effect is very striking in black and white, but it also allows scope for the use of a keen colour instinct. Violet and blue, for instance, if discreetly selected, would make a really memorable gown. FILOMENA.

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LITERATURE.

"The Complete Yachtsman."

Messrs. Methuen's various libraries are as good as anything of the kind can be, and the "Complete" Series is one of the best. The latest addition to the series is "The Complete Yachtsman," by B. Heckstall-Smith and Captain E. du Boulay. Their handsome book, with its hundreds of illustrations in the text, and its excellent whole-page plates, may claim to cover the ground; even ice-yachts, sand-boats, and sailing railway-trolleys find a place in five hundred pages that deal with the yachtsman's progress from start to finish. The chapters on practical seamanship are the reliable opinions of experts; those on racing are delightful. The section devoted to designing will provoke a certain measure of controversy among experts to whom the maxim *quot homines, tot sententiae* applies. The history of yachting will appeal to the general reader; indeed, the authors are to be complimented on the fashion in which they have contrived to make a volume that bristles with

technicalities tell an interesting story to the average man. At the same time there are plenty of expert patrons for such a volume as this. Yachting has advanced in popular favour to an enormous extent in the past few years; the number of clubs has increased steadily, and clever builders of craft of all sizes have their hands full. In these days when so many forms of sport tend to minimise the dangers and physical exertion originally associated with them, it is well for the nation at large that yachting should be upon the 'up' grade. "The Complete Yachtsman" may do something to extend the popularity of a sport that yields to none in the attractions it puts before the hard, healthy sportsman who lives within touch of estuary or open sea.

Submarine Engineering.

for which we are under an obligation to its author, Mr. T. W. Corbin. His avoidance of them appears to have put him on his mettle to see that instruction is not lacking in consequence, and the result is an extremely lucid and informing treatment of the subject in all its branches. For the purposes of this book, Mr. Corbin regards water as the enemy. Water obstructs our way to places whither we wish to go; it eats our coasts and overwhelms our lands; it destroys our ships and covers up our treasures. Hence, the need of divers and diving-bells, the instruments of salvage, cables, tunnels, breakwaters and docks,—all the operations of engineering, in fact, carried out beneath the surface of the water. These, and the submarines, the need for which is of a different kind, Mr. Corbin undertakes to describe and explain in this thorough and attractive volume. A page or two on the properties of air and the methods of compressing it are an elementary but necessary introduction to chapters on the diver. On him is based all submarine engineering. The sensation of discomfort, passing to sharp pain, due to unequal pressure on the eardrum, is naturally relieved through the action of swallowing, and so it

"The Romance of Submarine Engineering" (Seeley, Service) steers clear of technical terms, for which we are under an obligation to its author, Mr. T. W. Corbin. His avoidance of them appears to have put him on his mettle to see that instruction is not lacking in consequence, and the result is an extremely lucid and informing treatment of the subject in all its branches. For the purposes of this book, Mr. Corbin regards water as the enemy. Water obstructs our way to places whither we wish to go; it eats our coasts and overwhelms our lands; it destroys our ships and covers up our treasures. Hence, the need of divers and diving-bells, the instruments of salvage, cables, tunnels, breakwaters and docks,—all the operations of engineering, in fact, carried out beneath the surface of the water. These, and the submarines, the need for which is of a different kind, Mr. Corbin undertakes to describe and explain in this thorough and attractive volume. A page or two on the properties of air and the methods of compressing it are an elementary but necessary introduction to chapters on the diver. On him is based all submarine engineering. The sensation of discomfort, passing to sharp pain, due to unequal pressure on the eardrum, is naturally relieved through the action of swallowing, and so it



TELEPHONING TO THE BOTTOM OF THE SEA: DIVERS AT WORK, AND THEIR ATTENDANTS ABOVE, TO WHOM THEY TRUST THEIR LIVES.

BY PERMISSION OF MESSRS. C. E. HEINKE AND CO., LTD., LONDON.

"An attendant stands with the air-pipe in one hand and the life-line in the other, paying them out as the diver gropes his way down, while two more men turn the handles of the pump, and a fourth listens with the telephone to his ear. . . . When [the diver] descends he very largely trusts his life in the hands of his comrades above."

From "The Romance of Submarine Engineering," by T. W. Corbin; by Courtesy of the Publishers, Messrs. Seeley, Service and Co.

is the custom with many men working in compressed air to carry some acid drops to suck. In this way they overcome the only disagreeable feeling—the qualms of a novice apart—in descending to the ocean depths. It is an over-rapid ascent that brings the worst experience the diver can suffer. A too quick release of the air (principally nitrogen) absorbed by the blood while he is under pressure has serious effects. Mr. Corbin's text, ranging over the wide field we have indicated, is well served by the numerous illustrations.



SAILING ON LAND: A SAND-BOAT AT BEMBRIDGE.

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From "The Complete Yachtsman," by B. Heckstall-Smith and Captain E. Du Boulay; by Courtesy of the Publishers, Messrs. Methuen.



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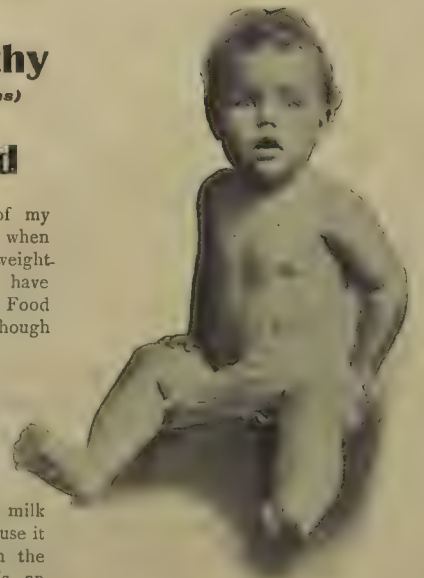
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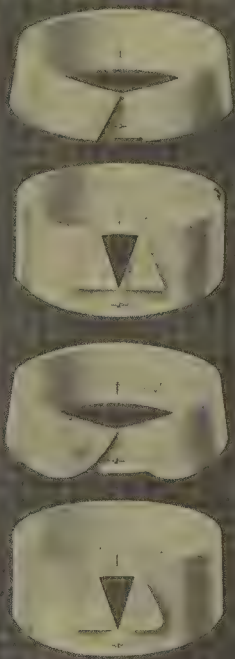


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THE CHRONICLE OF THE CAR.

The Work of the Petrol Committee. The second Report of the Petrol Committee has just been issued, and embodies some forty-five closely printed pages of evidence and appendices, which ought to set those thinking who profess to believe that the motoring associations are doing nothing for the motorist in the matter of the fuel problem. As a matter of fact, the Report is eloquent of a great deal of work and careful inquiry on the part of the Committee, which has succeeded in eliciting a lot of information of illuminating value to the student of the future of motoring, as affected by the fuel-supply question.

It is manifestly impossible for me to set out even the heads of the full investigation covered by the terms of the Report, but there are, nevertheless, points of interest to which a passing reference should be made. The first of these to suggest itself is the one affecting the rise in the price of petrol, produced by the immutable laws of supply and demand. We have heard a good deal of this rise being due to the greed of the controlling companies, and I am bound to say that I agree that this is the dominating factor in the price-situation. But it is obvious that no combine, no matter what its capital strength, can inflate prices unless there is a huge and quite stable demand for the commodity affected, and one which is progressively increasing. Now, we know that the increase in the demand is roughly, so

perhaps, convey a great deal to say that the import of petrol reached sixty-two millions of gallons during 1911, and was nearly eighty millions of gallons last year. What

amount of statistical figures relating to bare imports. It shows that, so long as the demand increases as it is doing, there is not the least hope that the trusts will be compelled to drop their prices to the motorist. One other significant point about this is that, huge as the rise in freight appears on paper, it only affects the price of petrol to the consumer to the extent of about 1½d. per gallon and, as we know, the increase has been several times that amount. Therefore, the fact that something like 125 tank-steamers are now in process of building is not necessarily a sign of hope for the future.

Naturally, what the motorist is most interested in—there being no apparent hope in petrol—is the question of an alternative fuel. This matter has been thoroughly gone into by the Committee, and while I am not constitutionally a pessimist, I am afraid I do not see much daylight yet. Benzol, as might have been expected, has been the particular form of fuel on which the Committee has concentrated for the time being, and it has heard some very interesting evidence. The first witness examined was Lieutenant-Colonel Wilton, of the Gas Light and Coke Company, who detailed the process of benzol-recovery, and then went on to give facts as to output and cost. Briefly, what he told the Committee was that his company's output of 90 per cent. benzol is about 80,000 gallons, and of 90 per cent. toluol about 20,000 gallons annually, accounting for 100,000 gallons of 70 per cent. spirit per



A GIFT TO BRITAIN'S AERIAL NAVY: THE BLÉRIOT MONOPLANE PRESENTED TO THE NATION BY THE INTERNATIONAL CORRESPONDENCE SCHOOLS.

The machine was bought by shilling subscriptions contributed by students of the International Correspondence Schools in various parts of the Empire, whose total number is some 203,000, including 90,000 in Great Britain. The ceremony of presenting it was performed by a deputation, headed by Lord Desborough, which was received by Colonel Seely at the War Office on January 28. Last autumn Mr. Robert Slack, the airman, who is a student of the schools, made a demonstration tour round the country on the machine, accomplishing 1700 miles without mishap.

is of significance, however, is that within the past three years freights for oil-tank steamers have risen

from fifteen to sixty shillings per ton from North Atlantic and Black Sea ports! That, I think, supplies a far better indication of the enormous rise in demand than any



FIRST SHOWN AT THE PARIS SALON: ONE OF THE NEW 20-H.P. AUSTIN CHASSIS, FITTED WITH LEVÉE LANDAULETTE BODY-WORK.

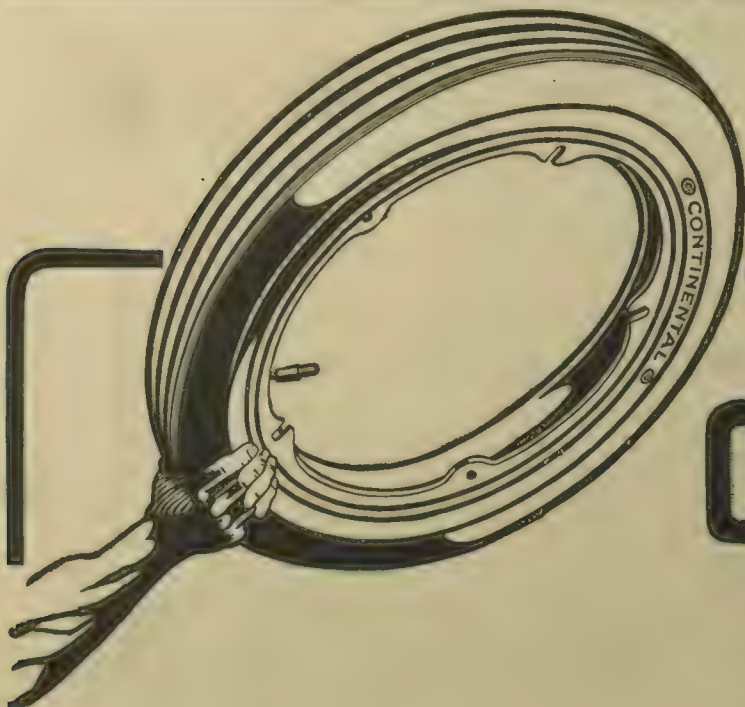


REMARKABLE FOR FINE COACH-WORK: A 30-H.P. SIX-CYLINDER SHEFFIELD-SIMPLEX "TEDWORTH" LANDAULETTE.

far as this country is concerned, something like 20 per cent per annum—the figure is not absolutely correct, but it is near enough for the purpose. By itself it does not,

annum—a mere drop in the ocean. Now, this spirit, which is just as good for motor-car propulsion as petrol, costs eightpence per gallon to produce. Add to this

(Continued overleaf)



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—but to give the Motorist the utmost possible economy of tyre service for the longest time and the least bother, with

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This is not mere talk, but historic fact, as the

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Ist. Grand Prix de la Sarthe,
Ist. Grand Prix de Belgique,

Ist. Monaco Rallye,
Ist. Targa Florio (Sicily),
Ist. Gaillon Hill Climb,

1912, were all won on

"CONTINENTAL" TYRES.

EARLY MOTOR-CAR TYPES.

No. 5 :—THE GLADIATOR.

The year 1896, marked in the Dunlop series by an early Gladiator car, was an eventful one in the history of motoring. On November 13, to drive without being preceded by a man carrying a red flag, or without complying with the law laid down for the regulation of traction-engines and steam-rollers, was to pursue the direct road to the police station. A day later this anomaly was removed, and motor-cars were allowed to pursue peacefully the path of evolution, though at the strictly limited speed of twelve miles per hour. Emancipation Day, as November 14 was dubbed, was celebrated by a drive to Brighton, in which thirty-three cars took part, thirteen surviving the journey.

The illustration is interesting also in that it shows a type of vehicle that has now almost disappeared from the London streets. One may safely prophesy that to the next generation the horse-drawn omnibus will be known only by pictorial representation. Such a thought, one may be sure, never entered the heads of the "outsides" as they gazed with amusement on the little Gladiator alongside in 1896.

In tyre history, too, 1896 has a special significance. It was the first year in which Dunlops came into general use for motor-cars, and from that year onwards there has been a steady rise in both Dunlop quality and reliability, until, like the modern car, it is difficult to see in what way they can be improved.

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TYRESFIRST IN 1888 ; FOREMOST
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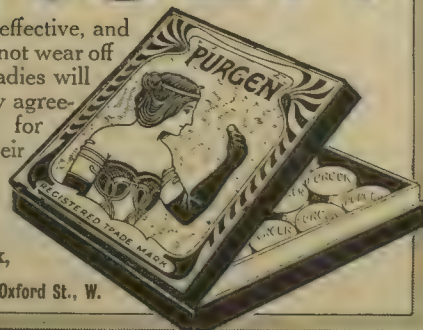
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Continued.]

threepence per gallon duty, and twopence per gallon for the retailer's profit, and we get 1s. 1d. per gallon, without any profit for the producing company, or anything added for cost of distribution. That supplies a very fair index of the extent to which benzol, produced under the particular conditions obtaining at gas-works, will be able to compete with the trust-controlled petrol. Nor, it seems to me, are we much better off when we come to talk about the benzol recovered from coke-ovens. Two witnesses were called on this point. One put the possible production of benzol from this source at about 24,000,000 gallons per annum; the other at about half this quantity. Both were apparently agreed that it could not be bought at the present time for less than ninepence per gallon. That means, of course, that the benzol obtained from the manufacture of coke is no better off competitively than that produced in gas-works. What this question of comparative price means is well indicated by the evidence of one witness, who said: "In 1907 we started to knock down the price of petrol in the Manchester district, and we put it down from 1s. 6d. to 1s. We sold several thousand gallons [of benzol], but the moment we got the petrol down to 1s., everybody went back to petrol, and we were left in the lurch, so that we gave it up."

The Price Question.

It seems to me that it is on this matter of price that the benzol proposition is likely to come down badly. We see from the evidence quoted that benzol cannot be sold under existing conditions at less than 1s. 3d. per gallon—I am adding the amount of the tax, which had not been imposed as long ago as 1907—and we do know that it would be possible for the petrol companies to sell at 1s. per gallon, and still do reasonably well out of it. There is not the slightest doubt about it—the moment benzol commences to make itself felt in the market, we are in for a bitter war of rates, which the petroleum companies can stand far better than the colliery people. This would enable us to buy our fuel cheaply for a time; but once the benzol-producers had had enough of the ruinous competition, up would go the price of petrol again, and we should in the end pay dearly for our temporary advantage. However, it is no use meeting trouble half-way, so we will leave the matter in the meantime with a pious expression of hope for the best.

Motoring in America.

The results of a census of motor-cars owned by its readers has been published by a New York weekly, the *Literary Digest*. Letters of inquiry were sent to subscribers in thirteen typical American cities and two suburban districts; replies were received from 70 per cent. of the total, and some interesting tabulated results were obtained. The most conspicuous fact revealed was that out of 265,000, 102,695 owned motor-cars, representing a total investment of £50,000,000. Amongst the 181 makes cited, the Cadillac easily led, with 4554—a full 500 in front of the next. The third car in point of popularity was the Buick, with 3519. The figures given are eloquent of the growth of automobilism in the United States.

W. WHITTALL.

CHESS.

TO CORRESPONDENTS.—Communications for this department should be addressed to the Chess Editor, Milford Lane, Strand, W.C.

MAX J MEYER (Boscombe).—Thanks for your letter and enclosures. We fully appreciate your kind attentions.

W GREENWOOD (Sutton Mill).—It looks as though the veterans can hold their own still. Thanks for fresh problem.

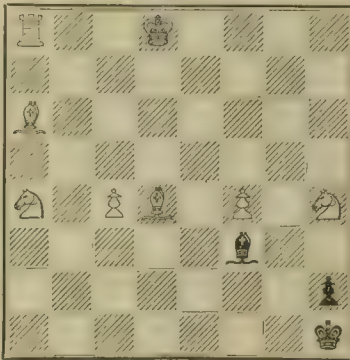
R M T (Holborn).—You will see in Problem No. 3583 that you share the fate of many others in being sold by the composer.

H J M.—Thanks for problem.

F R KNOX.—If your new version is correct we shall be pleased to publish it.

PROBLEM No. 3586.—By W. H. TAYLOR.

BLACK.



WHITE.

White to play, and mate in three moves.

CHESS IN LONDON.

Game played in the City of London Chess Club Tournament, between Dr. SCHUMER and Mr. H. J. SNOWDEN.

(French Defence.)

- | | | | |
|------------------|-----------------|-------------------|----------------|
| WHITE (Dr. S.) | BLACK (Mr. S.) | WHITE (Dr. S.) | BLACK (Mr. S.) |
| 1. P to K 4th | P to K 3rd | 18. B to K B 3rd | K R to Q sq |
| 2. P to Q 4th | P to Q 4th | 19. P to K Kt 3rd | B to Kt 7th |
| 3. Kt to K B 3rd | Kt to Q B 3rd | 20. R to Kt sq | B to Q 5th |
| 4. P to Q 4th | P takes P | 21. R to K sq | B to K 4th |
| 5. Kt takes P | Kt takes K | 22. B to Kt and | |
| 6. Q takes Kt | Q to R 4th (ch) | | |
| 7. Kt to B 3rd | P to Q R 3rd | | |
- Black's last move was of little service, as so often the case with Q to R 4th. He is in a vicious circle against the opposing knight outside at Kt 4th; but the text-move leaves a bad "hole," as later developments show.
- | | | | |
|-----------------|-------------|----------------|------------|
| 8. B to K 2nd | Kt to K 2nd | 23. Q to R 5th | P to Q 5th |
| 9. Castles | Kt to B 3rd | | |
| 10. Q to Q sq | B to B 4th | | |
| 11. B to Q 2nd | Q to B 2nd | | |
| 12. Kt to R 4th | B to Q 5th | | |
- Kt to Q 5th would force exchanges much to Black's relief.
- | | | | |
|----------------|------------|---------------------|-------------|
| 13. R to B sq | Castles | 24. B takes Kt | Q takes B |
| 14. P to B 5th | R to Kt sq | 25. R takes B | B takes P |
| | | 26. Q R to K sq | B to K 3rd |
| | | 27. K R to K 4th | B to Q 4th |
| | | 28. Kt takes B | R takes K |
| | | 29. R to K 8th (ch) | R takes K |
| | | 30. R takes R (ch) | K to R 2nd |
| | | 31. Q to K 2nd | P to Kt 3rd |
| | | 32. Q to K 4th | Q to Q 2nd |
| | | 33. R to K 7th | Q to B 4th |
| | | 34. Q takes Q | R takes Q |
| | | 35. R takes Kt P | R to B 6th |
| | | 36. R to B 6th | R to Q 6th |
| | | 37. P to B 7th | Resigns |
- P to Q 3rd is better, but Black's game is getting difficult.
- A pretty little coup de valeur, the purpose of which appears in the next move. Black should answer with P to Kt 3rd.
- Presumably an oversight which loses a piece right off. The rest of the game is simple enough.

CORRECT SOLUTION OF PROBLEM No. 3577 received from P N Banerji (Dhar, Central India); of No. 3578 from R Tidmarsh (Vernon, H.C.); of No. 3580 from C H Hattey (Providence, R.I.); J W Beatty (Toronto, H.A. Sells (Denver, U.S.A.), and J Murray (Quebec); of No. 3581 from J W Beatty, Walter D Davidge (Washington), and J Murray; of No. 3582 from L Schlu (Vienna), T Maddsen (Rotterdam), J B Camara (Madeira), C Barretto (Madrid), F T Shellard (Bristol), and J Isaacson (Liverpool); of No. 3583 from C M F and P Fataki (Budapest).

CORRECT SOLUTIONS OF PROBLEM No. 3584 received from E J Winter-wood (Paignton), R Worters (Canterbury), G Skillingfield Johnson (Cobham), J Fowler, J Churcher (Southampton), H Grasett Baldwin, H S Brandreth (Cimiez), G Bakker (Rotterdam), J Wilcock (Shrewsbury), and H R Nicholls (Willesden).

SOLUTION OF PROBLEM No. 3585.—By J. PAUL TAYLOR.

- | | |
|----------------------------|-----------------|
| WHITE | BLACK |
| 1. P to K 8th (becoming B) | P takes B (a R) |
| 2. K to B and | K moves |
| 3. B mates | |
- If Black play 1. P takes B (a Kt), a. B to Q 7th, etc.

In honour of the German Emperor's fifty-fourth birthday, the annual gala performance took place in the Berlin Opera House on Jan. 27. The scene, as usual, was one of the utmost brilliance. This year the play produced was "Kerkyra" (Corcyra), specially written for the occasion by Joseph Luff, with incidental music by Joseph Schlar. The subject was of peculiar interest to the Kaiser, from his association with the island of Corfu, which is, of course, the ancient Corcyra. The first scene presented a picture of Corcyra in the year 432 B.C., whilst the second consisted of folk-dances of modern Corfu. Berlin can boast the proud possession of two institutions which take a very high rank indeed from the artistic point of view. These are the Royal Theatre and the Berlin Opera, both under the personal direction of Count Georg von Hülsen-Haeseler. Herr Franz Winter, who is also a director, and Baron Dr. von Gersdorff both help Count von Hülsen-Haeseler in his gigantic task. It is quite obvious that the present magnificent state of the German stage is due to encouragement from the highest in the land. The Emperor William II., friend of England and protector of the peace of the world, surrounds himself with the most distinguished personalities in the art world. Notable amongst them is his Excellency Count von Hülsen-Haeseler, who has brought both opera and theatre to such a pitch of perfection.

After a creditable performance of "Tristan und Isolde" at Covent Garden, the centre of London musical interest shifted again to the Queen's Hall, where Scriabine's "Prometheus" was performed twice. The first attempt did not pass without remonstrance from descendants of the two-legged guardians of the Capitol, some of whom, knowing that there was to be a second trial of the experiment, fled from the wrath to come. Scriabine has taken a scale which is nearly a whole-tone one; he is not concerned with any of the ordinary rules of composition save to avoid them; he is alleged to require various colours to emphasise his message, and in some of his music he requires scent too. Doubtless there are many who would hold that the addition of an anæsthetic would render the appeal of his music complete. It is hard to discuss such "music"—the word is almost a euphemism; it is only for the ultra modern to whom the old conventions appeal no longer.

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Kidney complaint is *serious*, because when the kidneys fail to act properly they leave uric acid and an excess of watery waste in the blood.

Do you know whether you have any tendency towards kidney disease?

Is there pain in the loins and back, especially on rising in the morning? Is stooping painful?

Are your eyes puffy or dropsical? Is there water collected in the ankles or limbs? Are your hands and feet generally cold? Have you noticed sediment or gravel?

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These symptoms arise from kidney waste left in the blood by weak kidneys. Doan's Backache Kidney Pills are solely for the kidneys and urinary system—they do not interfere with the liver, stomach or bowels, but they relieve the kidneys like ordinary medicines relieve the bowels; they help the kidneys to filter the blood, and they prevent the waste water remaining too long in the system. They are therefore a valuable remedy to all—men and women, old and young—and should be used when an extra strain is thrown upon the kidneys by a cold, influenza, overwork, errors in diet, or any other cause, for it is at such times that fatal kidney disease may set in quietly and without warning.

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THE ROTOGRAVUR PROCESS USED IN "THE ILLUSTRATED LONDON NEWS": AN EXPLANATION.

The Rapidly Produced Photogravure.

It has been made abundantly evident to us that very many of our readers are taking uncommon interest in the Photogravure Supplements which have become a regular feature of *The Illustrated London News*, and have shown conclusively that it is not only possible, but politic, to reproduce topical pictures and letterpress by the photogravure process in such time that they can be published as part of the regular weekly issue and in such a manner that it may justly be claimed for them that nothing so artistically satisfactory has ever been presented before as a section of a newspaper. That being so, we feel that the moment has come for us to give an explanation of this method of printing, which has already changed many ideas and, without question, has a limitless future before it. In support of the statement, let us quote a recent issue of *Photography*. In a leading article on the subject, that journal said: "Photogravure—printing from intaglio plates etched by a photographic process—has been known for half a century . . . The charms of a photogravure are due to the fact that the paper on which it is printed need not have a glossy surface . . . and also to the extreme richness and depth of the shadows. This last is caused by the shadows being actual casts of the recesses in the copper plate, recesses which have grained and not polished surfaces, whereas in the half-tone process it is the polished upstanding portions which take the ink and transfer it to the paper. So great is the effect of these differences that between the best results by the two processes there can hardly be any comparison . . . It has long been the aim of inventors to perfect a method by which photogravures could be produced rapidly and in large numbers . . . For the first time photogravure has been produced on lines which will allow it to compete on all-fours with process work. The printing is as rapid; it is continuous, that is to say, the paper is put into the machine in a roll and not in separate sheets; both sides of the paper are printed in the same machine; reading matter as well as pictures are printed at the same time; the shiny-surfaced 'art' paper is no longer a necessity . . . Along with all these advantages, which carry with them a reduction in the cost of production which must ultimately revolutionise illustration, we have all the character and charm of the photogravure method." That character and that charm may be judged not only from the weekly supplements

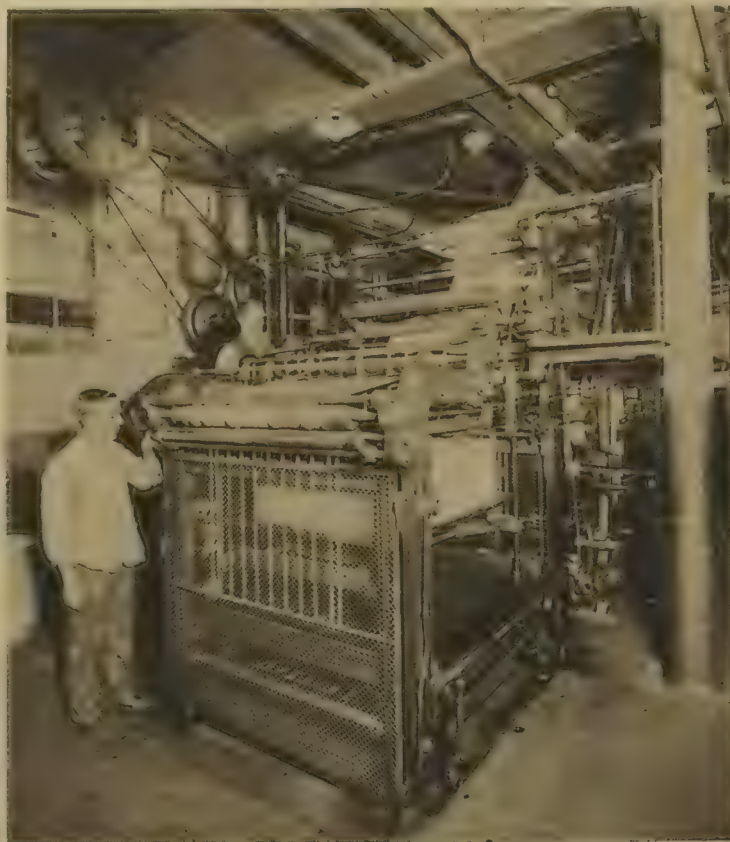
of *The Illustrated London News*, including the one in this number, but from this loose Supplement, the whole of which—pictures and letterpress—is printed in photogravure.

Advantages of the New Process.

Now, as to the value of the rapid photogravure process. Something has been said of the excellent results yielded and the speed with which they are attained: let it be pointed out further that anything which can be photographed can be reproduced by it and printed with most artistic effect, with an economy which cannot be equalled—quality considered—by any other system of quick printing. Then, too, the new photogravure method is ahead of the old in that it provides a level printing-

surface, made up of just so many cells to the square inch, which means that there can be produced mechanically an intaglio printing-plate so perfect in its finish that it calls neither for retouching by hand nor for elaborate, therefore slow, "make-ready": a point of much importance to the artist this, for it ensures a precise rendering of his work, which is presented without having undergone modification by alien hands. It must not be thought, however, that there is no possibility of making additions and other alterations when such may be required. Were it so, serious difficulties might arise now and again and the commercial scope of the process would be distinctly lessened. Changes may be made, in the customary manner, on the negative, or on the positive made from the negative; even, by the skilful hand of the plate-finisher, upon the engraved copper printing-cylinders. And it must be noted that the cost of the printing-cylinders does not really represent very great expense, for each roller yields a remarkable amount of printing-surface: the etch-

ings are shallow and thus easily and quickly erased to make way for new, once the surface has been repolished; and when its circumference has become too small, the cylinder can be resurfaced in an electro-copper depositing bath. The etching itself, including the letterpress which accompanies it, is done on the printing-cylinder itself in a few hours, and costs very little more than the ordinary half-tone. So much for a few of the many points which, added to the charm of the finished product, make it the more remarkable that so excellent a process—the best for high-class illustrations—should have been comparatively unexploited and unused in the past, and should have been so closely



IN THE OFFICES OF "THE ILLUSTRATED LONDON NEWS" AND "SKETCH": THE ROTOGRAVUR ROTARY MACHINE FOR THE RAPID PRINTING OF PHOTOGRAVURES—THE SHEET-DELIVERY END.

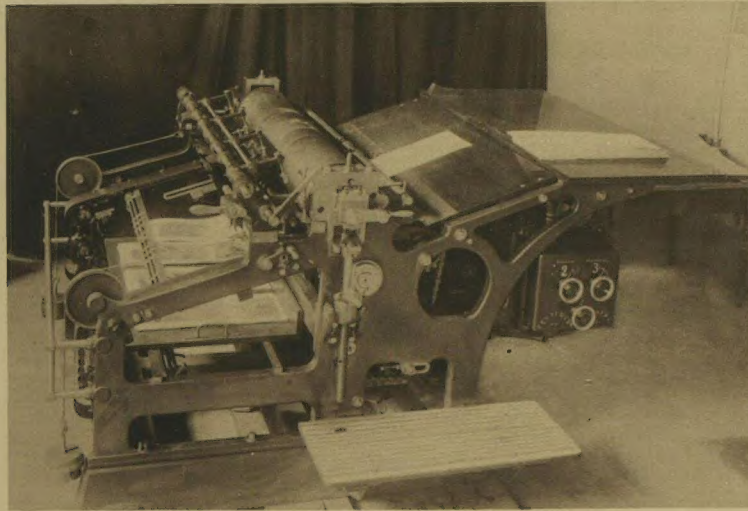
The paper, after receiving the impressions from the engraved cylinders, passes over the machine and is cut, by a rotary knife, into sheets with eight subjects on each side. These sheets are delivered automatically in the manner shown in the photograph on to a lowering-table, from which they are taken to a floor-trolley for delivery to the folding-machines.

guarded as to its details as to be practically unknown to the public, save by results.

Rotogravur Described. In principle, it may here be remarked, photogravure is practically the same process as that used for wall-paper printing and silk-printing, curious as this may seem at first blush; and, therefore, as regards speed bears the relation to plate-printing which the perfected newspaper

instructions as to size, date and time of delivery, and so on. Next, the process-engraver, trained in the art and science of photography and mechanical reproduction for printing, goes to work; while the descriptive lines for the subjects are written, are set up by the composing department, and are passed for press. The first duty of the process-engraver is to make the negative. Some might think that the production of a perfect printing-plate depends chiefly upon this;

but it does not. For all that, a good, full-timed, "plucky" negative is an essential, and the same may be said of the succeeding positive and negative prints. The making of a photogravure-plate was so well described in the issue of *Photography* already mentioned that we cannot do better than quote it again. In outline, photogravure "consists of giving to a highly polished copper plate a very fine grain. This is done by placing it in a box, or chamber, in which is a quantity of finely powdered bitumen. This bitumen dust is dispersed throughout the air of the chamber, given a few moments for the larger particles to settle, and then the copper plate is introduced and allowed to remain for a certain time in a horizontal position. A very fine dust settles upon the copper, and, the plate being taken out and heated, the bitumen dust attaches itself to the metal. A positive transparency having been made from the negative that is to be reproduced, a print from the transparency is made upon carbon tissue, and this is squeezed down upon the prepared copper plate and developed. The edges and back of the copper having been protected by varnish, the plate is immersed in solutions of iron perchloride of various strengths and etched. When the carbon tissue is thinnest, that is to say, where it has been least exposed to light, which, as it was printed from a positive and not a negative transparency, will be the shadows or darker parts of the picture, the etching-fluid gets through quickest, and so attacks the copper most, and *vice versa*. So that when the etching is finished, and the carbon tissue and varnish are cleaned off, we have an engraved plate, in which the high lights of the picture are formed by those portions which have been least attacked by the perchloride, while the

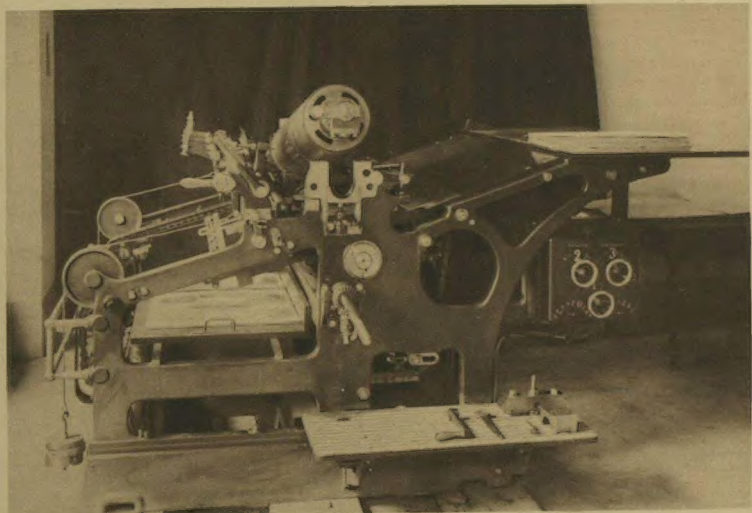


THE SMALL INTAGLIO SHEET-FEED RAPID-PRINTING KEMPE-BLECHER PRESS, WHICH WILL PRINT PHOTOGRAVURES FROM POSTCARD SIZE TO 25 INCHES BY 35 INCHES—SHOWING THE MACHINE READY TO PRINT; THE SHEET ABOUT TO BE TAKEN BY THE GRIPPERS TO BE PRINTED; AND THE SHEET BEING DELIVERED AFTER PRINTING.

web-press of to-day bears to the old Albion hand-press, while, when quality and cost are compared, it is without a rival. For those unfamiliar with the theory of the silk-printing machine as applied to this process, we may give a very brief description of it. A large iron drum, rubber-surfaced, is brought to bear against the engraved printing-cylinder. Between these two cylinders, one of which is power-driven, passes the paper to be printed. By pressure, the rubber-surfaced drum forces the paper to pick up the ink from the recesses of the engraved printing-cylinder, which has the whole of its surface first covered with ink from a colour-box below it, then wiped clean by a steel scraper, which is so placed that it does its vitally important work while at the same time avoiding unnecessary friction and the consequent wearing away of the engraved surface: this inking and wiping takes place at every revolution of the engraved cylinder. The Rotogravur method is that more generally called the carbon, and is the simplest and most practical for the printing of many impressions or few; that is, for what the printer calls a short or long run, a circulation small or large. It has been brought to such a pitch of efficiency that, as our readers well know, it can be employed for the reproduction of topical illustrations. The surface printed from is the reverse of the half-tone surface. In the latter, the surface is broken up into innumerable dots of various sizes, and the ink is impressed upon the paper by the top of those dots in one thin, uniform layer. In the case of the photogravure the solid black and the tones are set upon the paper by being sucked up from the recesses of the printing-plate, a system which conveys to the paper ink not of uniform thickness, but of a number of thicknesses: thus the full tone-values of the original picture are wonderfully preserved. For the sake of additional clearness, we may compare the half-tone block with the rubber stamp of commerce: the raised surface of dots conveys the ink to the paper just as the raised rubber lines convey it; with photogravure the ink is sucked up from recesses representing what is raised in the other case.

Photogravures in the Making. Let us take the procedure step by step. The subjects for reproduction are chosen by the Editor, are scaled to the sizes required, and are then handed to the process-engraving department, with full

etching-fluid gets through quickest, and so attacks the copper most, and *vice versa*. So that when the etching is finished, and the carbon tissue and varnish are cleaned off, we have an engraved plate, in which the high lights of the picture are formed by those portions which have been least attacked by the perchloride, while the



OF GREAT VALUE TO THE PRINTER OF MODERATE MEANS: THE SMALL INTAGLIO SHEET-FEED RAPID-PRINTING KEMPE-BLECHER PRESS FOR PRINTING PHOTOGRAVURES FROM POST-CARD SIZE TO 25 INCHES BY 35 INCHES—SHOWING THE CYLINDER RAISED FOR THE PLACING OF THE ENGRAVED PLATE UPON IT.

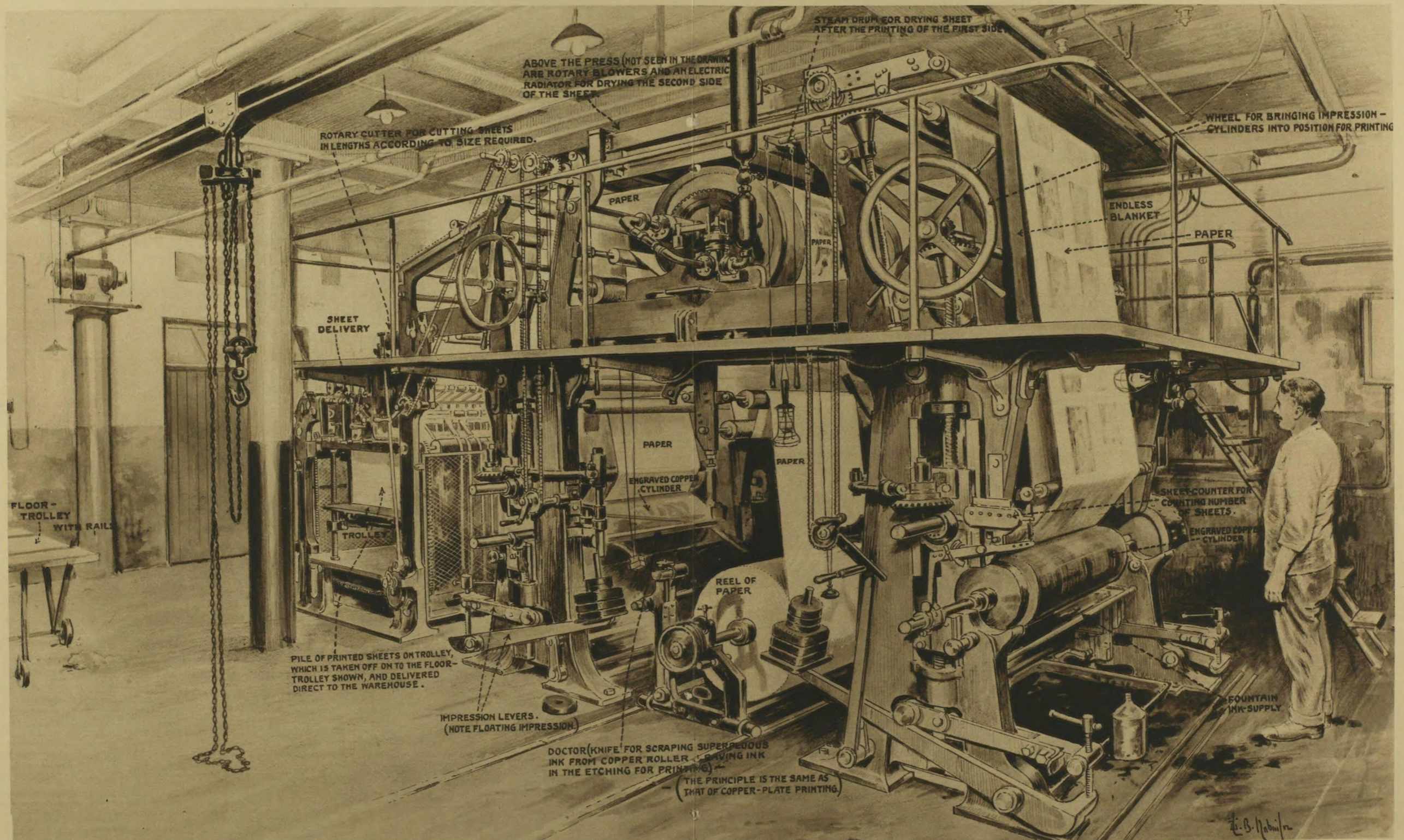
This particular machine should be of great value to the printer of moderate means, who, not having space for the larger rotary-machine, can install this and print photogravures of any size between post-card and 25 inches by 35 inches. It is fitted with a raising-cylinder as illustrated. Over this cylinder is slipped the engraved copper cylinder, which is clamped on by an expanding sleeve. The cylinder is then dropped into its bearings, and the machine is ready for printing, no further preparation, make-ready, or roller-filing remaining to be done. Messrs. Lascolles and Co., Ltd., are fitting out a plant at 27, Floral Street, Covent Garden, W.C., especially for the engraving of cylinders; and the printer can have his cylinders engraved and delivered to him just as he would obtain his half-tones in the ordinary way from his photo-engraving house.

shadows are those which have been most deeply etched." In Rotogravur, the first step that has to be taken to reproduce a picture is to "photograph it, and from the negative so obtained a transparency is made, dry-plates being used for both operations. From this transparency, which is, of course, a positive, a print is made on carbon tissue, and after the carbon tissue has been exposed under the

(Continued on Page VI.)

PRINTING 6000 8-PAGE SHEETS AN HOUR: A REMARKABLE ROTARY PHOTOGRAVURE MACHINE.

DRAWN BY W. B. ROBINSON.



USED TO PRINT THE PHOTOGRAVURES IN "THE ILLUSTRATED LONDON NEWS" AND "THE SKETCH": THE ROTOGRAVUR MACHINE FOR THE RAPID REPRODUCTION OF TOPICAL AND OTHER SUBJECTS AND LETTERPRESS BY THE PHOTOGRAVURE PROCESS.

This is the machine by which the photogravures for "The Illustrated London News" and "The Sketch" are printed each week, and is also that by which the whole of this Supplement was printed. It is notable for a number of reasons: not only does it yield excellent specimens of a very beautiful process, but it turns out the reproductions as rapidly as though they were in the ordinary half-tone, prints both pictures and letterpress at a single operation, and prints both sides of the paper. It runs at three thousand revolutions an hour, and prints the paper in duplicate, which means that it turns out six thousand copies of each subject on an eight-page sheet in an hour. Moreover, it delivers each sheet absolutely dry and unsmearable, even at the moment of its leaving the machine. As the

drawing shows, paper is fed to it from a roll, and is divided, after the impressions have been made on it by the engraved cylinders, by a rotary cutting-knife. No "make-ready," or other time-losing work, is necessary; immediately the engraved cylinders have been set in place, printing can begin. The etching of the cylinders results, as is fully explained in this Supplement, in a plate which is the reverse of the half-tone, in that the ink, instead of being taken from the top of raised dots, is sucked from recesses in the plate in various thicknesses, according to the depth of tone required. After leaving the reel, the paper passes over the first engraved cylinder. It is then conveyed round a steam-drum, which dries it. Next, it passes over the second engraved cylinder, and so on.

transparency, it receives a second exposure underneath a special form of ruled screen. The printing-surface being a cylinder, and not, as in ordinary photogravure, a flat plate, a cylinder of polished copper, the dimensions of which are governed by the size of the sheet of pictures that are to be printed, is prepared. On this cylinder the carbon tissue is laid down and developed, each picture in exactly the right place on the cylinder for the picture to appear correctly in the finished sheet. Any reading-matter that is to go with the pictures is similarly laid down; and then, the parts that are not to print having been given a coat of protective varnish, the whole cylinder is placed in an etching-fluid, which makes its way with varying rapidity through the different parts of the carbon tissue image, and eats away the copper underneath. When this action has proceeded to the desired extent, the tissue and varnish are cleared off the cylinder, and it is ready for printing." Two separate cylinders are required, one for each side of the paper, if both sides are to be printed. With regard to the actual printing, it may be said that "each cylinder is carried on a horizontal spindle, just above a roller, the lower part of which dips into a large trough of a comparatively fluid ink. This roller spreads a very liberal coating of the ink all over the surface of the cylinder as the latter rotates. Its rotation brings the inked surface against a steel knife [the Doctor], which is drawn backwards and forwards along the surface of the cylinder. The knife removes the whole of the ink from those parts of the copper which have been left bright owing to the protection of the varnish, or of the 'resist,' during the etching, but it eaves the ink in the hollows of the copper so that when the cylinder in its further travel is brought into contact with the web of paper, which is pressed closely against it, the paper picks the ink out of these etched parts and so obtains its image."

The Etching and Other Matters.

The negative and the succeeding positive and negative prints having been obtained satisfactorily, there comes a stage in the work which must be done under precisely the proper conditions, or everything already performed will be nullified. The temperature and the strength of the etching-solution must be exactly what they should be; for the operator, however able he may be, has then little control which will enable him to guarantee a perfect reproduction, the numerous details, tones and qualities, desired in the final result being produced mechanically. For that reason the tones and qualities sought must, of course, be represented fully in the carbon "resist" upon the copper cylinder before etching is begun; and, for that reason, it is obvious that a perfect printing-cylinder may most surely be secured by the use of a constant etching-solution which will eliminate uncertainty; let it be emphasised again that if the correct qualities are not present in the carbon tissue on the copper cylinder, nothing that can be done in etching, inking, or printing will save the situation. Imagine for a moment the engraved printing-cylinder, with its many and minute tones, making several thousand revolutions an hour, flushed with ink in a fraction of a second and in that fraction of a second having its surface wiped before it comes into contact with the paper which sucks the ink from its recesses. Remember that the impression on the paper is made up of layers of ink of thickness varying according to the depth of the recesses in the plate. Think what ingenious and smooth-running machinery this means, what delicate adjustment, and what care. Then realise that, as in other photo-mechanical processes, it is in the printing-plate that the quality must be found. The etching must be well understood in theory and in practice, otherwise the result will be failure or, at best, a happy chance. The whole question may be summed up as follows: To etch properly a gelatine print of "resist"—being dependent upon its absorbent qualities in exact ratio to the degree of insolubility set up by light in the printing—means simply a knowledge of the relative strength and action of the etching-solution at a given temperature. At any temperature, say between 60 deg. and 95 deg. Fahrenheit, the stronger the etching-solution the slower is its action, and the weaker the etching-solution the quicker is its action upon the gelatine resist. The stronger and longer the etching action, the greater the contrasts secured, and *vice versa*, much as with the development of an ordinary photographic plate. The rest of the work, apart from the photographic side, is purely mechanical, a matter of system and rules. In fact, photogravure now presents no difficulties greater than those which confronted the pioneer

workers in half-tone. It will succeed as surely as half-tone succeeded, and quickly now that it is possible to put it to general use.

The Sole Agents in Great Britain.

The inventors and owners of the photogravure process used in *The Illustrated London News* and in the *Sketch*—the Rotogravur Deutsche Tiefdruck Gesellschaft m.b.H., Berlin—have appointed The Illustrated London News and Sketch, Ltd., their agents in Great Britain; and that company is installing, at 27, Floral Street, Covent Garden, London, W.C., up-to-date plant with which to deal with the process. In those premises will be installed one of the small sheet-feed Kempe-Blecher Intaglio printing-machines illustrated in this Supplement, and upon this can be done all grades of commercial work. Firms putting in their own machines will be able to have their plates, or printing-cylinders, engraved there at so much per square inch. This point should be especially noted by the printer of moderate means, who will be able to set up such a small-feed printing-machine when he has no room for the larger rotary photogravure press, get his engraved cylinders made for him in Floral Street, and so be in a position to extend his business very considerably by being able to supply the immense demand for the small-catalogue work, the display cards, and the innumerable other items in photogravure, which can be dealt with cheaply and rapidly by the process under review. An idea of the possibilities of the process may be gained not only from our own use of it, but from the fact that the *Berliner Tageblatt* have just installed machines in Berlin, and are printing *Der Welt-Spiegel* twice a week entirely in photogravure. These machines run at seven thousand revolutions an hour, and print the subjects in duplicate, so that each delivers fourteen thousand sheets an hour, folded and ready for delivery to the public, and all of them as dry as a bone, unsmearable even the moment after they have left the machine.



A DIAGRAM SHOWING HOW THE SURFACE OF THE PRINTING-PLATE TAKES THE INK IN THE CASE OF HALF-TONE.



A DIAGRAM SHOWING HOW THE SURFACE OF THE PRINTING-PLATE TAKES THE INK IN THE CASE OF PHOTOGRAVURE.

In the case of the half-tone plate, the ink is received, in a layer of uniform thickness, on the upraised dots of the metal plate, just as ink is received on the upraised portions of a rubber-stamp. In the case of the photogravure plate, the position is reversed. The ink is received, in various thicknesses, according to the varying depths of shadows required in the impression, in recesses. The ink is sucked up from these recesses by the paper, which thus receives it, not in a uniform layer, but in a number of thicknesses, a fact which, of course, makes for softness, richness, and depth of tone.

A Final Word or Two.

To sum up, there is no doubt as to the future of the printing of photogravures by rotary machines. The results are so good, so economical, and can be put to so many widely differing uses that it would seem that the old order of things must—as it has always done—give place speedily to the new. A fresh era in printing has begun. So must it ever be. When the wood-engraving reached the highest point of its artistic and commercial development, the half-tone block came upon the scene to do yet better, to reproduce more faithfully and with greater celerity; now that the half-tone block, in turn, has reached its meridian, the photogravure has arrived in all its beauty and softness of tones—to stay and grow in popularity and power. Assuredly it will revolutionise the better-class presentation of paintings, drawings, and photographs. Both artists and photographers will welcome it as permitting the wide circulation of their works in a form in which they have never been distributed before. The newspaper-proprietor, the book-publisher, the printer and his customers will find it valuable for many reasons, some of which we have given. The public will appreciate it inasmuch as it yields them pictures of topical events and of affairs that are not topical alike in the most pleasing of shapes.

N.B.—Upon application, The Illustrated London News and Sketch, Ltd., Milford Lane, Strand, London, W.C., will be pleased to supply full particulars to intending purchasers. Inspection of the plant at work at its offices can be made by appointment.

Since we went to press with the above article, an amalgamation has been formed between the International Tiefdruck Gesellschaft m.b.H., Berlin; Dr. Mertens—the pioneer in rapid photogravure printing; The Illustrated London News and Sketch, Ltd.; and Intaglio Patents, Ltd., 88-90, Upper Ground Street, Blackfriars Bridge, S.E. Intaglio Patents, Ltd., have erected for demonstration purposes at their works, 33, Stamford Street, S.E., a Mertens machine, which is employed chiefly for rapid newspaper-printing. The joint company will be represented by Messrs. Hunters, Ltd., 16-18, St. Bride Street, E.C., who will act as the selling agents. This will give considerable impetus to the progress of photogravure-printing in this country, as, by the combination mentioned, each firm will have the benefit of the knowledge gained by its associate firms; and the English company will control machines for all forms of photogravure-printing. It may safely be predicted that the amalgamation will cause great strides to be made in the process in the near future.

RAPID PHOTOGRAVURE: WORK BY A ROTOGRAVUR MACHINE.

PHOTOGRAPH SUPPLIED BY THE DEUTSCHE PHOTOGRAVUR ACT. GES.



PRINTED, WITH THE OTHER SEVEN PAGES OF THIS SUPPLEMENT, AT THE RATE OF 6000 COPIES AN HOUR:
REMBRANDT'S "MAN IN THE GOLDEN HELMET."

The above reproduction of Rembrandt's famous "Man in the Golden Helmet," in the Berlin Museum, gives an excellent idea of the fine results obtainable by the use of the Rotogravur machine installed at the offices of "The Illustrated London News." The press, printing the subjects in duplicate, turned out 6000 complete copies of this eight-page Photogravure Supplement per hour.